# service manual



# TABLE OF CONTENTS

| Introduction  | PAGE           |
|---|----------------|
| Service Note  |                |
| MW and LW Tuner   |                |
| FM Tuner  |                |
| Tuner Alignment   |                |
| Main Amplfier   | •              |
| Phono Amplifier   | •              |
| Power Supply Unit   |                |
| Test Equipments For Servicing   |                |
| Parts List  | ~ =            |
|   |                |
| LIST OF ILLUSTRATIONS   |                |
|   | DACE           |
| FIGURE  | PAGE<br>13     |
| FIGURE  1. Dial Stringing Diagram   | 13             |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  | 13             |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  3. Main Chassis Ajustment and Component Locations   | 13             |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  3. Main Chassis Ajustment and Component Locations  4. AM/FM/FM MPX Tuner Circuit  | 13<br>14<br>15 |
| FIGURE  1. Dial Stringing Diagram.  2. Rear Panel Component Locations.  3. Main Chassis Ajustment and Component Locations  4. AM/FM/FM MPX Tuner Circuit  5. LW/MW Coil Unit.   | 13141516       |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  3. Main Chassis Ajustment and Component Locations  4. AM/FM/FM MPX Tuner Circuit  5. LW/MW Coil Unit  6. FM Sub IF Amplifier                              | 13141516       |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  3. Main Chassis Ajustment and Component Locations  4. AM/FM/FM MPX Tuner Circuit  5. LW/MW Coil Unit  6. FM Sub IF Amplifier  7. PRE/MAIN Power Amplifier | 1314151616     |
| FIGURE  1. Dial Stringing Diagram  2. Rear Panel Component Locations  3. Main Chassis Ajustment and Component Locations  4. AM/FM/FM MPX Tuner Circuit  5. LW/MW Coil Unit  6. FM Sub IF Amplifier                              | 131415161617   |

# INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service data for the Marantz Model 29 Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced technicians only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the Receiver.

The parts list furnishes information by which replacement parts may be orderd from the Marantz Company. A description is included for parts which can be usually obtained through local suppliers.

### 1. SERVICE NOTE

The Model 29 consists of following units. Each unit mounted on a printed circuit board is circumscribed by a bold dotted line on the circuit diagram.

| 1. | FM Front End, MW Front End,               |    |            |      |
|----|---|----|------------|------|
|    | FM/AM IF Amplifier, FM MPX                |    |            |      |
|    | Stereo Demodulatormounted                 | on | PC board I | P100 |
| 2. | FM Sub-IF Amplifier mounted               | on | PC board 1 | P200 |
| 3. | Phono Amplifier mounted                   | on | PC board 1 | P300 |
| 4. | Tone Amplifier and Main Amplifier mounted | on | PC board 1 | P400 |
| 5. | Rectifiers and Power Supplymounted        | on | PC board   | P500 |
| 6. | Loudness Control Unit, High               |    |            |      |
|    | and Low Filter Unitsmounted               | on | PC board   | P600 |
| 7. | LW Front End Coil Unitmounted             | on | PC board   | P800 |



#### 2. MW and LW TUNER

#### 2-1. Circuit Description

This tuner consist of two PC board P100 and P800.

Most parts are mounted on the PC board P100 and coils of long wave band and trimming capacitors are mounted on PC board P800 ..

The MW front end is comprised of a converter and a diode. Signals induced in the ferrite-rod antenna L001 are roughly selected in the antenna tuning circuit. The selected signals are applied to the base of converter transistor H113 through coupling capacitor C117. The converter is a collector-emitter self oscillating circuit and the local oscillation signal appears at the base of H113. Both signals are then mixed at the base-emitter junction and converted into 455kHz intermediate frequency. The amplified IF signals are obtained from the collector of H113 and applied to the first IF transformer L113.

Diode H115, reverse-biased by resistors R113 and R114, eliminates signal overload distortion without sacrificing receiving sensitivity.

The IF signals are led to the IF amplifier consisting of two stages H114 and H106 and amplified to a high level. The amplified IF output is applied to diode H109 to detect audio signals. Then the detected audio signals are led to output pin J118 through filtering network. The DC component of the detected IF signals is used for AGC which affects the base bias current of H114. A part of IF signal output is also applied to diode H112 through capacitor C140 and rectified to obtain DC current to energize the tuning meter M001.

The long wave signals induced on an external antenna are first fed to a wave trap consisting of L801 and C805.

The trap is inserted to eliminate undesirable interference which may be caused in a high signal strength area.

The desired signals are then fed to the antenna tank circuit (L802/L804····) and finally to the base of converter transistor of H113 to obtain 455KHz IF signals.

# 2-2. Suggestions for Trouble Shooting of MW/LW Tuner

Symptom: No Reception.

First, try to tune stations by rotating flywheel tuning knob slowly and observe the tuning meter whether it deflects or not. If the tuning meter gives a deflection at several frequencies received, no failure exists in the stages at least preceding IF transformer L115.

Next, connect an oscilloscope to tuner output pin J118 and check audio signals. If the tuning meter does not deflect, check the local oscillator circuit. Normal oscillation voltage at the hot end of the oscillator capacitor is 2 to 3 volts, varying with tuning capacitor position. When measuring oscillation voltage use an RF VTVM, no circuit tester gives correct indication. If the local oscillation voltage is normal check all voltage distributions in the tuner circuit by using a circuit tester or VTVM and compare the measured values with those written in the schematic diagram.

#### 3. FM TUNER

#### 3-1. Circuit Description

The FM tuner section consists of four parts, FM front end, IF amplifier, MPX stereo decording circuit, and Sub-IF amplifier.

FM signals induced by an FM antenna are led to FM antenna coil L101. These signals are then applied to FET RF amplifier H101 and the amplified outputs are led to mixer H102 through a tuning circuit and converted into 10.7MHz IF signals. H103 is the local oscillator transistor. The AGC voltage, obtained by rectifing a part of the second IF amplifier output, is applied to the gate of FET H101 through filtering network R125, R101 and C129.

The converted IF signals are led to the IF amplifier circuit, consisting of three transistor amplifier stages and one IC limiter. The FM IF amplifier shares its third stage transistor H106 with the AM IF amplifier. The IF signal fully amplified is then applied to FM discriminator transformer L111 and demodulated into audible signals. The demodulated audio signals are then applied to the base of 19kHz pilot signal amplifier H116. This amplifier operates as an emitter follower for the audio

signals and has no voltage gain. The audio output is obtained from the emitter of H116 and applied to the center tap of 38kHz tuned transformer L118 through the 67kHz SCA trapping filter consisting of L119 and C163. The audio signals are split into right and left channel circuits by the diode-switching networks, then led to the crosstalk canceling amplifiers. When the demodulated audio signal is stereo composite signal, the 19kHz pilot signal amplifier operates as a tuned amplifier for the 19kHz pilot signal and as an emitter follower for the composite signal except 19kHz. The pilot signal, amplified by H116, is applied to H117 for further amplification. Then it is rectified by the full wave rectifier circuit consisting of diodes H121 and H122, thus provided 38kHz pulsating current drives 38kHz sub-carrier amplifier transistor H120, and 38kHz sub-carrier is obtained. The 38kHz sub-carrier and stereo composite signal, except 19kHz, are superimposed at the secondary coil of L118 and the composite signal is alternatively sampled by the right and left channel switching diodes at the rate of 38kHz. The sampled or separated outputs are led to the crosstalk canceling amplifier consisting of H127 and H128. Then led to tuner output pins J112 and J114 after canceling undesirable crosstalk.

The second 19kHz pilot signal amplifier H117 is so designed that the emitter circuit is electrically switched on and off by controling the bias current of switching transistor H118. The bias current is obtained from the Sub-IF amplifier circuit consisting of transistor H201, 10.7MHz IF transformer L201 and two diodes H202 and H203. The stereo switch on the front panel is connected between the base and emitter of switching transistor H118. Therefore, when the switch is in its normal "off" position, the base and emitter is short-circuited and no emitter current flows. Thus the emitter of the second 19kHz pilot signal amplifier is cut off and no 19kHz signal appears at the collector of H117. No stereo separation is obtained. When the stereo switch is depressed, the emiter-base short-circuit is opened and if the FM signal received is stronger than the pre-determined level, the DC voltage produced by diode H202 and H203 becomes large enough to drive the switching transistor H118, thus H118 is turned on and H117 begins to operate. H119 is also

turned on and it turns the stereo beacon switching transistor H120 turning the beacon lamp on.

The direct current developped between-B and diode H203 is used to drive FM tuning meter M001.

#### 3-2. Suggestions for Trouble Shooting of FM Tuner

#### 3-2-1. Symptom: No FM Reception

First, turn on the power switch and try to tune FM stations. Rotate the flywheel tuning knob slowly and observe the FM tuning meter. If the tuning meter deflects at several frequencies, the tuner circuit preceding the limiter circuit may have no failure. Tune the set to a station and check the following points by using a high sensitivity oscilloscope: output of the FM discriminator test point (B), output of the 19kHz pilot signal amplifier test point (H), and Multiplex stereo output pin J112 or J114. When no reading is observed on the tuning meter, check the local oscillator circuit by using an RF VTVM. Normal local oscillation voltage is about 1 volts at the hot end of the tank circuit. If the oscillation voltage is normal, check all voltage distributions and compare them with those shown in the schematic diagram.

#### 3-3-2. Symptom: No Stereo Separation

First, check the stereo switch is depressed. Connect FM RF signal modulated by stereo signal to the rear FM antenna terminals and check the stereo beacon lamp is turned on or not. When the lamp is not turned on, connect an oscilloscope to test point © and observe 38kHz stereo sub-carrier is correctly generated or not.

#### 4. TUNER ALIGNMENT

The following alignment for FM and MW/LW tuner requires many precision measuring equipments. No alignment should be performed in the field unless the service man has these equipments and enough knowledge in solid state amplifier components, since all the units are factory aligned and not become misaligned by themselves.

#### 4-1. MW Front End

1) Set an AM signal generator to 600kHz, 400Hz 30% modulation. Tune the

- receiver to the same frequency and adjust oscillator coil L112 until the dial pointer coincides with the 600kHz marking on the dial.
- 2) Set the AM signal generator to 1400kHz. Tune the receiver to the same frequency and adjust trimming capacitor C801-2 mounted on the PC board P800.
- 3) Repeat procedure 1 and 2 until no further adjustment is necessary between the low end and the high end.
- 4) Set the generator to 600kHz. Tune the receiver to the same frequency and adjust antenna coil L001 in the plastic case for maximum output.
- 5) Set the generator to 1400kHz. Tune the receiver to the same frequency and adjust antenna trimming capacitor C801-1 mounted on the tuning capacitor for maximum output
- 6) Repeat procedure 4) and 5) until no further improvement is obtained.

#### 4-2. LW Front End

- Set an AM signal generator to 150kHz, 400Hz 30% modulation. Tune the receiver to the same frequency and adjust oscillator coil L803 until the dial pointer coincides with the 150kHz marking on the dial.
- 2) Set the AM signal generator to 370kHz. Tune the receiver to the same frequency and adjust trimming capacitor C801-4 mounted on the PC board P800.
- 3) Repeat procedure 1 and 2 until no further adjustment is necessary between the low end and the high end.
- 4) Set the generator to 150kHz. Tune the receiver to the same frequency and adjust antenna coil L802 in the plastic case for maximum output.
- 5) Set the generator to 370kHz. Tune the receiver to the same frequency and adjust antenna trimming capacitor C801-3 mounted on the tuning capacitor for maximum output
- 6) Repeat procedure 4) and 5) until no further improvement is obtained.
- Note. During tracking alignment, reduce the signal generator output as necessary to avoid AGC action.

#### 4-3. AM IF Amplifier

To align the AM IF amplifier, a sweep generator with marker generator combined is necessary.

- 1) Connect the sweep generator across test point P and common ground, connect an oscilloscope to test point C.
- 2) Turn each primary and secondary core of IF trasformers L113, L114, and L115 for maximum and symmetrical response.

#### 4-4. FM Front End

## 4-4-1. Local Oscillator Adjustment

- 1) Measuring instruments connection.
  - Connect an FM signal generator to the FM antenna terminals on the back side of the set. Connect a VTVM or oscilloscope across the speaker system terminals.
- 2) Set the FM signal generator to 90MHz, 400Hz 100% modulation. Tune the receiver to the same frequency and adjust oscillator coil L104 until the dial pointer coincides with the 90MHz marking on the dial.
- 3) Set the FM signal generator to 106MHz. Tune the receiver to the same frequency and adjust trimming capacitor C190 until the dial pointer coincides with the 106MHz marking on the dial.
- 4) Repeat procedure 2 and 3 until no further adjustment is necessary between the low end and the high end.

#### 4-4. FM Tracking Alignment

- 1) Set an FM signal generator to provide about  $5\mu V$  at 90MHz. Tune the receiver to the same frequency and turn each core of L101 and L102 for maximum output
- 2) Set the FM signal generator to 106MHz. Tune the receiver to the same frequency and adjust trimming capacitors C184 and C185 for maximum output.
- 3) Repeat procedure 1) and 2) until no further improvement is obtained.

#### 4-5. FM IF Amplifier

To align the FM IF amplifier, a high frequency sweep generator with 10.7MHz



marker generator combined is required. Connect the sweep generator to the T.P.D, an oscilloscope to test point A. Turn each primary and secondary core of IF transformers L107, L108, L109, and L110 for maximum and symmetrical response.

#### 4-6. FM Discriminator

Connect an oscilloscope to test point ® and turn the primary and the secondary cores of discriminator transformer L111 for straight and symmetrical "S" curve with 10.7MHz marker center.

More precision adjustment of discriminator requires a distortion meter. To make this precision adjustment, connect an FM signal generator having low distortion characteristics to the antenna terminals of the set. Tune the set to the FM signal and measure the distortion of audio output. Turn the primary core of the discriminator transformer until minimum distortion is obtained.

#### 4-7. FM Stereo Demodulator

A stereo multiplex and RF FM signal generator is required to make the separation adjustment on this circuit.

Perform the following adjustment in sequence.

- 1) Set the FM signal generator to 98MHz, 2KµV output level. Tune the receiver to the same frequency. Ensure that the stereo switch is depressed for stereo operation.
- Connect an oscilloscope probe to test point G and turn each core of L116,
   L117, and L118 for maximum stereo carrier wave on the CRT.
- 3) Turn the core of L118 again to obtain equal stereo separation in both of R and L channels.
- 4) Adjust trimming resistor R182 for maximum and equal stereo separation in both channels.

#### 4-8. FM Sub-IF Amplifier

To align the sub-IF amplifier, tune the receiver to an FM signal and turn the core of L201 so that the FM tuning meter reads maximum deflection.

#### 5. MAIN AMPLIFIER

#### 5-1. Circuit Description

#### 5-1-1. Amplifier

The audio signals selected by the selector switch S002-3F are led to the tone amplifier through stereo switch S601-2, tape monitor switch S601-1 and the volume control with loudness control network. The signals are applied through coupling capacitor C401 and resistor R401 to the base of H401. The amplified output of H401 is led to the base of H403 and its out to the tone control circuit. After bass and treble controlled, the signals are applied to the two stage amplifier consisting of H405 and H409.

The output of H409 is applied to the base of H411 and H413. These two transistors are operated in a complementary-symmetry configuration with their respective power transistors H001 and H002.

The output of H411 is applied to the base of H001, and that of H413 to H002. Combined operation of PNP transistor H413 and NPN transistor H411 with NPN power transistors H001 and H002 provides a single-ended push-pull output.

This output is applied to loudspeaker output terminals through speaker switch and headphones jacks.

To maintain overall stability and linearity, negative feedback is utilized throughout the amplifier. This feedback is also necessary to reduce distortion to be well under the specified limits. R441 and C427 condition the feedback loop gain.

#### 5-1-2. Dynamic Bias

Dynamic bias is applied to the bases of driver trasistors H411 and H413. H411 and H413 determine the class of operation for the power amplifier transistors H001 and H002, respectively, thus maintaining a constant class of operation by establishing and maintaining proper collector-to-emitter current. This dynamic bias circuit consists of adjusting resistor R455 and temperature sensitive diodes H702, and H704. The circuit provides a variable base bias for driver transistors H411,

and H413 and automatically maintains proper base voltage, bias condition, with temperature change.

#### 5-1-3. Power Transistor Protection Circuit

If an excessive current flow in the power transistor H001 and H002, voltage across the resistor R477 is increased and this turns on the transistor H407, thus the input signals to the transistor H405 is by passed.

Thus power transistors are protected from destroy due to excessive curret flowing.

#### 5-2. DC Balance and Bias Adjustment of the Main Amplifier

#### 5-2-1. DC Balance Adjustment

Connect an oscilloscope and a dummy load (8 ohms) across the speaker system output terminals for the channel being tested and an audio oscillator (1000Hz) to the AUX jack on the rear panel. Set the Bass, Treble and Balance controls flat or center position, the Volume control maximum. Turn the bias control resistor R455 fully clockwise. Adjust DC balance control R453 until equal clipping level is obtained for both polarities. Repeat the same procedure for the other channel.

Note. During DC balance adjustment, adjust the output level of the audio oscillator to show the clipping level on the CRT precisely.

#### 5-2-2. Bias Adjustment

Give no input signal and connect a VTVM across resistor R475 or R477. Adjust the bias control resistor R455 until the VTVM reads 8mV. Ensure no crossover distortion is observed on the CRT with a faint signal input from an audio oscillator. To adjust the other channel, connect the VTVM across resistor R476 or R478 and adjust bias control resistor R456 for the same voltage reading.

#### 5-3. Suggestions for Trouble Shooting of Power Amplifier

#### 5-3-1. Excessive line consumption

1) Check for shorted rectifiers H502, H503, H504, H505, H506, H507, and H508, also check C501, C502, C503, and C504, C507.

- 2) Check for shorted transistors H411~H414. Check for open control resistor R455 and R456 and bias diodes H415, H416, H701~H704
- 3) Check L003 for short.

CAUTION: Because the driver and output stages are direct coupled, components may fail as a direct result of an initial component failure. If a shorted or open transistor, diode, or control resistor is found be sure to check the remaining driver and output components for short or open circuits before re-energizing the amplifier.

#### 5-3-2. No line consumption or zero bias

- 1) Check line cord, over current circuit breaker, and bias diodes H415, H416, and H701~H704.
- 2) Check for open rectifiers H505, H506, H507, and H508, or open L003.

#### 6. PHONO AMPLIFIER

The phono amplifier consists of conventional negative feed-back amplifier and no analytical circuit description may be required.

#### 7. POWER SUPPLY UNIT

The power supply unit provides three different DC outputs of +40V, -11V and -2.6V. +38V output is obtained by bridge connected rectifiers H505, H506, H507, and H508 and filtering capacitor C503. This source energizes the power and tone amplifier and the phono amplifier.

Two rectifiers H503 and H504 are engaged in the rectification for—11V output. This output is well regulated by zener diode H501 and concerns with FM front end, MW /LW front end, FM/AM IF amplifier, MPX stereo demodulator, and Sub-IF amplifier. The power supply unit has another DC output of—2.6V for stereo beacon lamp operation.

#### 8. TEST EQUIPMENTS FOR SERVICING

| Item                | Manufacturer<br>and Model No.                   | Use  |
|---------------------|---|--|
| AM Signal Generator |   | Signal Source for AM Alignment   |
| Test Loop           |   | Used with AM Signal Generator  |
| FM Signal Generator | Less than 0.3% distortion                       | Signal source for FM Alignment   |
| Audio Oscillator    | Less than 0.02% residual distortion is required | Sine wave source for modulating AM or FM Signal Generator, and trouble shooting. |
| Stereo Modulator    | Less than 0.3% distortion                       | Modulating FM Signal Generator for Separation Alignment and trouble shooting.    |
| Oscilloscope        | high sensitivity                                | Wave form analysis and trouble shooting  |
| VTVM                | with RF probe                                   | Trouble shooting   |
| Circuit Tester      |   | Trouble shooting   |
| Sweep Generator     | For 455KHz and 10.7MHz                          | AM and FM IF alignment   |
| 8-ohm Resistors     | $\pm 0.5\%$ 50W no inductive                    | Dummy Load   |
| Line Voltmeter      | 0 – 150V AC                                     | Monitors line voltage  |
| Variable Autotrans- | 0— 140V, 10A                                    | Primary power voltage adjustment   |



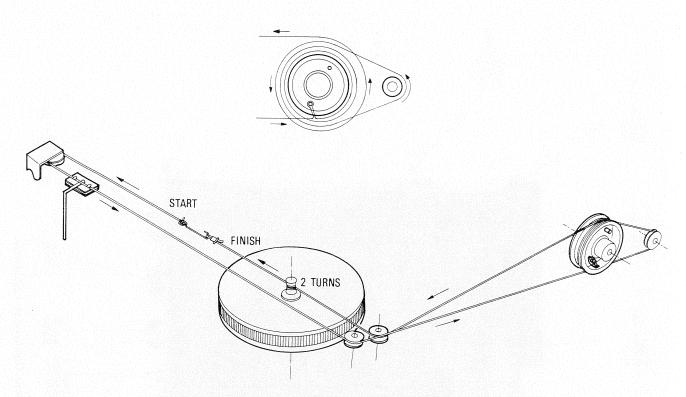


Fig. 1 Dial Stringing Diagram

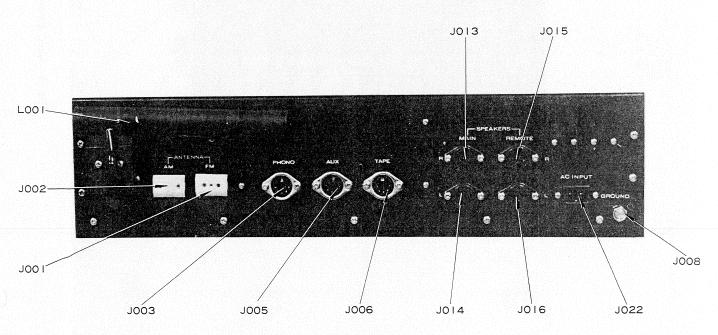


Fig. 2 Rear Panel Component Locations

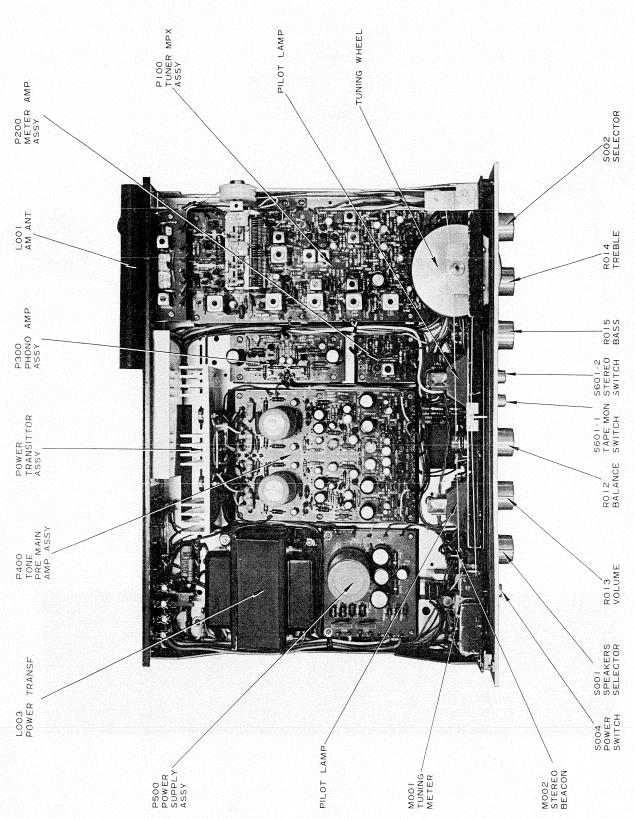


Fig. 3 Main Chassis Adjustment and Component Locations

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RIOS

RIOS

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Fig. 4 AM/FM/FM MPX Tuner Grcuit

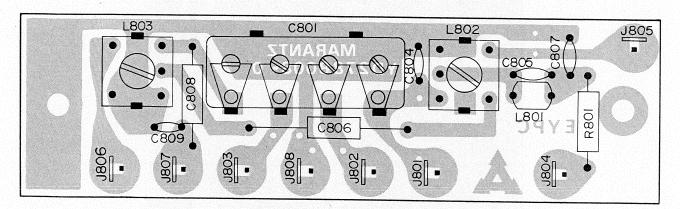


Fig. 5 LW/MW Coil Unit

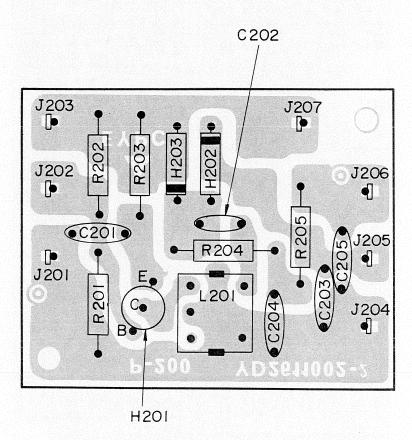


Fig. 6 FM Sub IF Amplifier

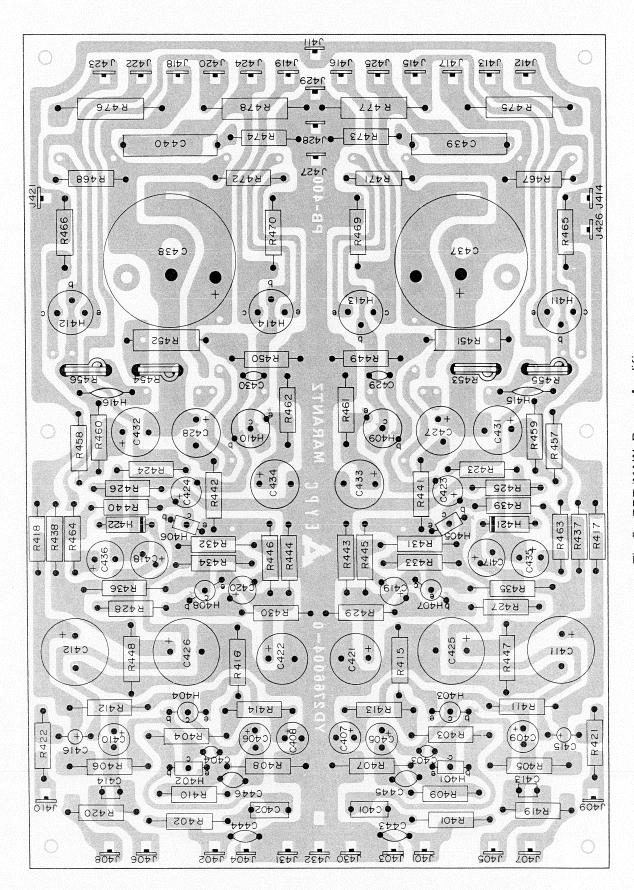


Fig. 7 PRE/MAIN Power Amplifier

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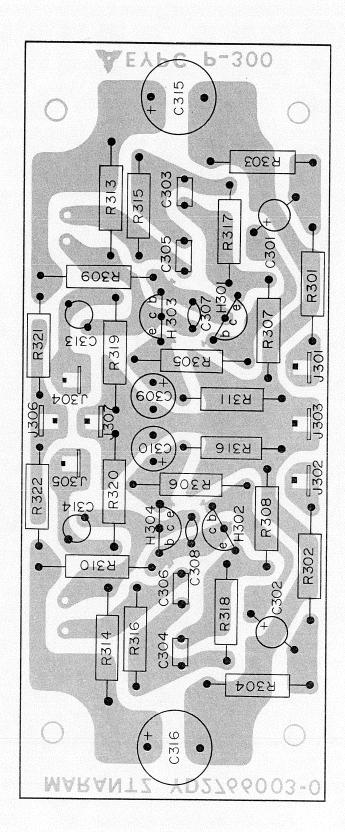
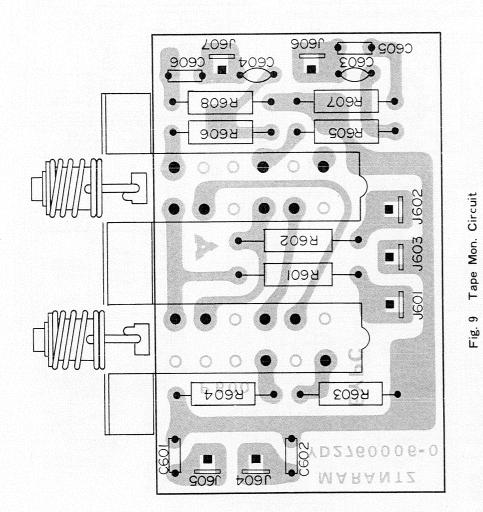


Fig. 8 Phono Amplifier



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15U J512 55<u>0</u> J508 . 1509 J507 9090 0202 •∏ H507]• ◆ H505 | •H506 • H 508 • • H502 -→ H504 → H503 . . . . . . . . . . . . . . R 502 († 55 ° • 6504 + • c 203 1+ R 501 . C.502 -H501 J502 J503 J504 J505 150 [P

Fig.10 Power Supply Unit

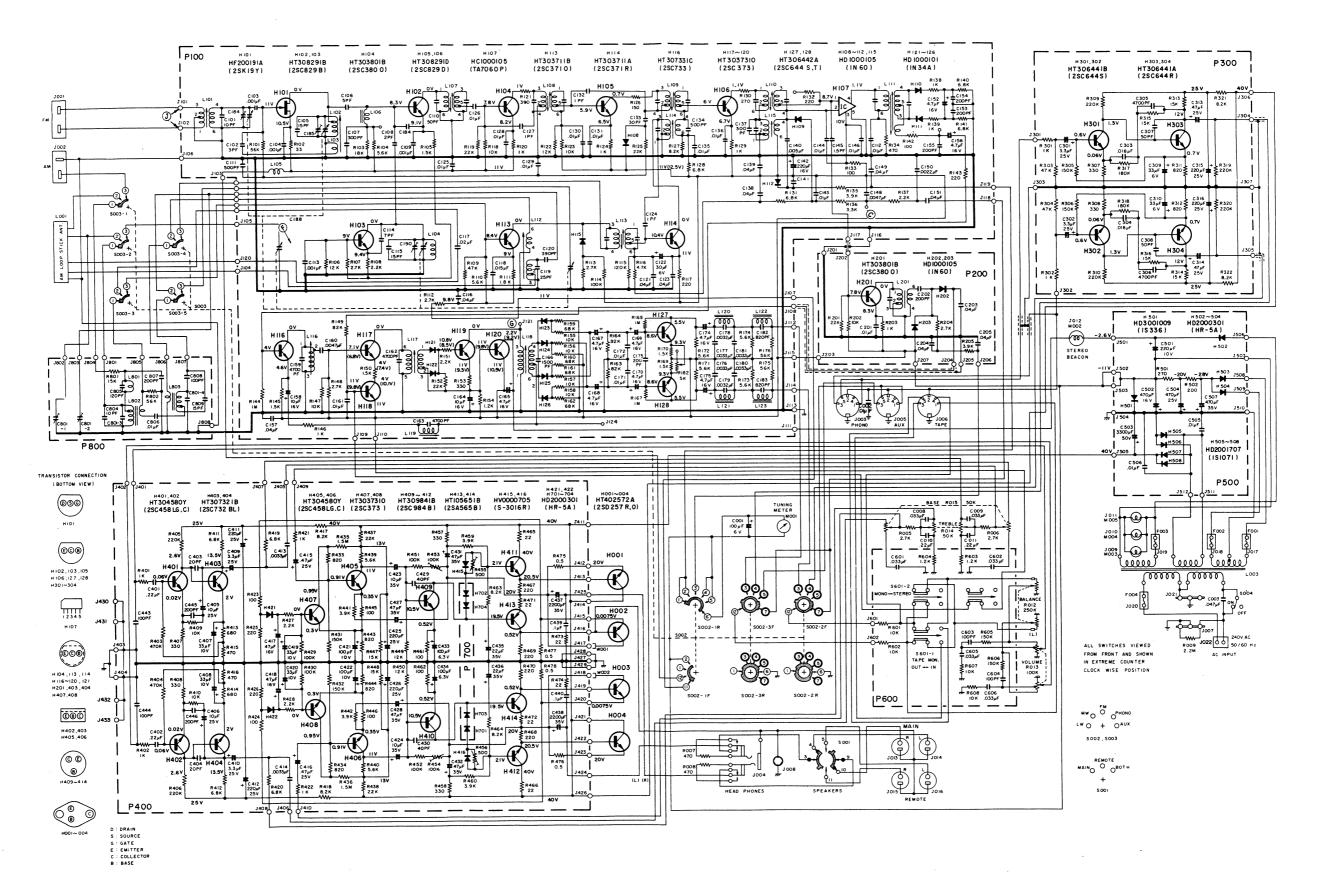


Fig. 11 Schematic Diagram

# **PARTS LIST**

| D.D.D.          |                          |                   | DEE            | MADANT''                 |                     |
|-----------------|--------------------------|-------------------|----------------|--------------------------|---------------------|
| REF.<br>DESIG.  | MARANTZ<br>PART NO.      | DESCRIPTION       | REF.<br>DESIG. | MARANTZ<br>PART NO.      | DESCRIPTION         |
| DESIG.          | PART NO.                 | DESCRIFTION       | DESIG.         | IART NO.                 | DESCRIT TION        |
| A 001           | 2788063010               | Escutcheon        | B409           | 2577106010               | Bearing             |
| A 002           | 2611257012               | Lid               | B047           | 2578160522               | Bracket K           |
| A 003           | 2611103013               | Pointer           | B410           | 2578160052               | Bracket             |
| A 004           | 2788265010               | Indicator         | B411           | 2578160062               | Bracket             |
| A 005           | 2788265020               | Indicator         | D401           | 5502030410               | R. H Rivet          |
| A 009           | 2577273010               | Fly Wheel         | D402           | 5502030410               | R. H Rivet          |
| A 010           | 2577063022               | Escutcheon        | B054           | 71400219Q0               | Spring              |
| A 011           | 2577063032               | Escutcheon        | B055           | 71101239M0               | Spring<br>Bracket K |
| A 012           | 2577067022               | Сар               | B061<br>B412   | 2597160500<br>2597160030 | Bracket K           |
| A 013           | 2577067022               | Cap               | B412           | 2597160040               | Bracket             |
| A 014<br>A 018  | 2577067022<br>2578067010 | Cap<br>Cap        | B414           | 2597112010               | Shaft               |
| A019            | 2578067010               | Cap               | B415           | 1336112010               | Shaft               |
| A 020           | 2578067010               | Cap               | B067           | 1202258010               | Hook                |
| A 021           | 2578067010               | Cap               | B068           | 1382005030               | Clamper             |
| A 022           | 2578067010               | Сар               | B069           | 1382005030               | Clamper             |
| A 023           | 2578067010               | Cap               | B070           | 1382005030               | Clamper             |
| A 531           | 2788302010               | Dial              | B071           | 1382005030               | Clamper             |
| A 532           | 2766053010               | Cover             | B072           | 1382005030               | Clamper             |
| A 533           | 2577154020               | Knob              | B073           | 1382005030               | Clamper             |
| A 534           | 2577154020               | Knob              | B074           | 1382005030               | Clamper             |
| A 535           | 2577154020               | Knob              | B075           | 1382005030               | Clamper             |
| A 544           | 2578154010               | Knob              | B076           | 2788160010               | Bracket             |
| A 545           | 2578154010               | Knob              | B077<br>B079   | 2788160030<br>2788101010 | Bracket<br>Support  |
| A 546           | 2578154010<br>2578154010 | Knob<br>Knob      | B079<br>B080   | 2788101010               | Support             |
| A 547<br>A 548  | 2578154010               | Knob              | B081           | 2788101010               | Support             |
| A 549           | 2578154010               | Knob              | B082           | 2788101010               | Support             |
| B 001           | 2788105010               | Chassis           | B083           | 2788101010               | Support             |
| B 002           | 2760160505               | Bracket K         | B084           | 2788101010               | Support             |
| B 401           | 2760160015               | Bracket           | B085           | 2788125010               | Joint               |
| B402            | 2577101020               | Support           | B501           | 2760053012               | Cover               |
| B403            | 2577112020               | Shaft             | B502           | 2760053020               | Cover               |
| B404            | 2766160022               | Bracket           | B503           | 2760267010               | Heat Sink           |
| B008            | 2788160020               | Bracket           | B504           | 2760267010               | Heat Sink           |
| $\mathbf{B}009$ | 2611160030               | Bracket           | B 505          | 2760267010               | Heat Sink           |
| B010            | 2611160030               | Bracket           | B 506          | 2577106020               | Bearing             |
| B011            | 2611160040               | Bracket           | B 507          | 2577053030               | Cover<br>Cover      |
| B012            | 2611160050               | Bracket           | B 508<br>B 509 | 2577053042<br>2788053012 | Cover               |
| B013            | 2611257022<br>2611005010 | Lid<br>Clamper    | B510           | 2760267010               | Heat Sink           |
| B015<br>B021    | 2788160500               | Bracket K         | B511           | 2577118030               | Spacer              |
| B405            | 2788160040               | Bracket           | B512           | 2577118040               | Spacer              |
| B406            | 2517112020               | Shaft             | B513           | 2766118010               | Spacer              |
| B407            | 2577112020               | Shaft             | B514           | 2577159020               | Drum                |
| B026            | 2506109010               | Shield            | B515           | 2577262010               | Pulley              |
| B028            | 2611109020               | Shield            | B516           | 2577262010               | Pulley              |
| B029            | 2611109020               | Shield            | B517           | 2577262010               | Pulley              |
| $\mathbf{B030}$ | 2766267013               | Heat Sink         | B518           | 2763259010               | Bush                |
| B032            | 2611055010               | Collar            | B519           | 2760118010               | Spacer              |
| B033            | 2611055010               | Collar            | B520           | 1271262010               | Pulley              |
| B034            | 2611055020               | Collar            | B521           | 2506057010               | Leg                 |
| B035            | 2611055020               | Collar            | B522           | 2506057010               | Leg                 |
| B036            | 2760109010               | Shield            | B 523<br>B 524 | 2506057010<br>2506057010 | Leg<br>Leg          |
| B037            | 2611109020<br>2760160030 | Shield<br>Bracket | B 524<br>B 527 | 1455120010               | Leg<br>Insulator    |
| B038<br>B041    | 2577112012               | Shaft             | B528           | 1455259010               | Bush                |
| B041            | 2577112012               | Bearing K         | B 529          | 1415118010               | Spacer              |
| B408            | 2577100300               | Retainer          | B530           | 72081604A0               | String              |
| D 700           | 2011104010               |                   |                |                          |                     |

| REF.                    | MARANTZ<br>PART NO.      | DECONIDETON                     | REF.         | MARANTZ                  |                                |
|-------------------------|--------------------------|---------------------------------|--------------|--------------------------|--------------------------------|
|                         |                          | DESCRIPTION                     | DESIG.       | PART NO.                 | DESCRIPTION                    |
| B531                    | 73033010A0               | Buffer                          | D073         | 51062608E9               | P. H. M Screw                  |
| B532                    | 73033010A0               | Buffer                          | D074         | 51062608E9               | P. H. M Screw                  |
| B533                    | 1455120010               | Insulator                       | D075         | 51062608E9               | P. H. M Screw                  |
| B534<br>B535            | 2611118010               | Spacer                          | D081         | 51060305E9               | P. H. M Screw                  |
| D001                    | 2611118010<br>51570305B0 | Spacer P. H Tapt Screw          | D082<br>D083 | 51060305E9               | P. H. M Screw                  |
| D001                    | 51570305B0               | P. H Tapt Screw                 | D083         | 51060305E9<br>51060305E9 | P. H. M Screw P. H. M Screw    |
| D003                    | 51570305B0               | P. H Tapt Screw                 | D085         | 51060305E9               | P. H. M Screw                  |
| D004                    | 51570305B0               | P. H Tapt Screw                 | D086         | 51060305E9               | P. H. M Screw                  |
| D005                    | 51570305B0               | P. H Tapt Screw                 | D087         | 51060305E9               | P. H. M Screw                  |
| D006                    | 51570305B0               | P. H Tapt Screw                 | D088         | 51060305E9               | P. H. M Screw                  |
| D007                    | 51570305B0               | P. H Tapt Screw                 | D089         | 51060305E9               | P. H. M Screw                  |
| D008                    | 51570305B0               | P. H Tapt Screw                 | D 090        | 51060305E9               | P. H. M Screw                  |
| D009                    | 51570305B0               | P. H Tapt Screw                 | D091         | 51060305E9               | P. H. M Screw                  |
| D010<br>D011            | 51570305B0<br>51570305B0 | P. H Tapt Screw P. H Tapt Screw | D092         | 51060305E9               | P. H. M Screw                  |
| D011                    | 51570305B0               | P. H Tapt Screw                 | D093<br>D094 | 51060305E9<br>51060305E9 | P. H. M Screw                  |
| D012                    | 51570305B0               | P. H Tapt Screw                 | D094<br>D095 | 51060305E9<br>51060305E9 | P. H. M Screw P. H. M Screw    |
| D014                    | 51570305B0               | P. H Tapt Screw                 | D096         | 51060305E9               | P. H. M Screw                  |
| D015                    | 51570305B0               | P. H Tapt Screw                 | D097         | 51060305E9               | P. H. M Screw                  |
| D016                    | 51570305B0               | P. H Tapt Screw                 | D098         | 51060305E9               | P. H. M Screw                  |
| D017                    | 51570305B0               | P. H Tapt Screw                 | D099         | 51060305E9               | P. H. M Screw                  |
| D023                    | 51570305B0               | P. H Tapt Screw                 | D100         | 51060305E9               | P. H. M Screw                  |
| D024                    | 51570305B0               | P. H Tapt Screw                 | D101         | 51060305E9               | P. H. M Screw                  |
| D025                    | 51570305B0               | P. H Tapt Screw                 | D102         | 51060305E9               | P. H. M Screw                  |
| ${ m D026} \ { m D027}$ | 51570305B0<br>51570305B0 | P. H Tapt Screw P. H Tapt Screw | D103         | 51060305E9               | P. H. M Screw                  |
| D027                    | 51570305B0               | P. H Tapt Screw                 | D104<br>D105 | 51060305E9<br>51060305E9 | P. H. M Screw<br>P. H. M Screw |
| D029                    | 51570305B0               | P. H Tapt Screw                 | D105         | 51060305E9               | P. H. M Screw                  |
| D030                    | 51570305B0               | P. H Tapt Screw                 | D107         | 51060305E9               | P. H. M Screw                  |
| D031                    | 51570305B0               | P. H Tapt Screw                 | D108         | 51060305E9               | P. H. M Screw                  |
| D032                    | 51570305B0               | P. H Tapt Screw                 | D109         | 51060305E9               | P. H. M Screw                  |
| D033                    | 51570305B0               | P. H Tapt Screw                 | D110         | 51060305E9               | P. H. M Screw                  |
| D034<br>D042            | 51570305B0               | P. H. Tapt Screw                | D111         | 51060306E9               | P. H. M Screw                  |
| D042                    | 51570305B0<br>51570305B0 | P. H Tapt Screw P. H Tapt Screw | D112         | 51060306E9               | P. H. M Screw                  |
| D043                    | 51570305B0               | P. H Tapt Screw                 | D113<br>D114 | 51060306E9<br>51060306E9 | P. H. M Screw<br>P. H. M Screw |
| D045                    | 51570305B0               | P. H Tapt Screw                 | D115         | 51060306E9               | P. H. M Screw                  |
| D046                    | 51570305B0               | P. H Tapt Screw                 | D121         | 51060305E9               | P. H. M Screw                  |
| D047                    | 51570305B0               | P. H Tapt Screw                 | D122         | 51060305E9               | P. H. M Screw                  |
| D048                    | 51570305B0               | P. H Tapt Screw                 | D123         | 51060305E9               | P. H. M Screw                  |
| D049                    |                          | P. H Tapt Screw                 | D124         |                          | P. H. M Screw                  |
| D050                    | 51570305B0               | P. H Tapt Screw                 | D125         | 51060305E9               | P. H. M Screw                  |
| D051<br>D052            | 51570305B0<br>51570305B0 | P. H Tapt Screw P. H Tapt Screw | D126         | 51060306E9               | P. H. M Screw                  |
| D052                    | 51570305B0               | P. H Tapt Screw P. H Tapt Screw | D129<br>D130 | 51060308E9<br>51060308E9 | P. H. M Screw<br>P. H. M Screw |
| D054                    | 51570305B0               | P. H Tapt Screw                 | D130         | 51060308E9<br>51060312E9 | P. H. M Screw                  |
| D055                    | 51570306B0               | P. H Tapt Screw                 | D133         | 51060312E9               | P. H. M Screw                  |
| D056                    | 51570308B0               | P. H Tapt Screw                 | D136         | 51060406E9               | P. H. M Screw                  |
| D 057                   | 51570308B0               | P. H Tapt Screw                 | D137         | 51060406E9               | P. H. M Screw                  |
| D058                    | 51570308B0               | P. H Tapt Screw                 | D138         | 51060406E9               | P. H. M Screw                  |
| D059                    | 51570308B0               | P. H Tapt Screw                 | D139         | 51060406E9               | P. H. M Screw                  |
| D060                    | 51570308B0               | P. H Tapt Screw                 | D141         | 51060408E9               | P. H. M Screw                  |
| D061<br>D062            | 51570308B0               | P. H Tapt Screw P. H Tapt Screw | D142         | 51060408E9               | P. H. M Screw                  |
| D062                    | 51570308B0<br>51570308B0 | P. H Tapt Screw P. H Tapt Screw | D143         | 51060408E9               | P. H. M Screw                  |
| D066                    | 51062605E0               | P. H. M Screw                   | D144<br>D146 | 51060408E9<br>51060410E9 | P. H. M Screw<br>P. H. M Screw |
| D 067                   | 51062605E9               | P. H. M Screw                   | D140<br>D147 | 51060410E9<br>51060410E9 | P. H. M Screw                  |
| D068                    | 51062605E9               | P. H. M Screw                   | D148         | 51060410E9               | P. H. M Screw                  |
| D069                    | 51062605E9               | P. H. M Screw                   | D149         | 51060410E9               | P. H. M Screw                  |
| D070                    | 51062605E9               | P. H. M Screw                   | D150         | 51060410E9               | P. H. M Screw                  |
| D071                    | 51062605E9               | P. H. M Screw                   | D151         | 51060410E9               | P. H. M Screw                  |
| D072                    | 51062608E9               | P. H. M Screw                   | D152         | 51060410E9               | P. H. M Screw                  |

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REF.
                                                                        MARANTZ
REF.
        MARANTZ
                                                                                               DESCRIPTION
                                DESCRIPTION
                                                               DESIG. PART NO.
DESIG. PART NO.
                       O. C. H. M Screw
                                                               D275
                                                                        59030810P0
                                                                                      Washer
         51140305E9
D161
                                                                                     FM/AM/MPX Front End P.C Board
                                                                        YD27880010
                       O. C. H. M Screw
                                                               P100
D162
         51140305E9
                       O. C. H. M Screw
                                                               R 101
                                                                        RT10563140 56K\Omega \pm 10\% ¼ W, Carbon Film
D163
        51140305E9
                                                                        RT10330140 33\Omega \pm 10\% ¼W, Carbon Film RT10183140 18K\Omega \pm 10\% ¼W, Carbon Film
D164
        51140305E9
                       O. C. H. M Screw
                                                               R102
                                                               R 103
                       O. C. H. M Screw
D167
         51140305E9
                                                                        RT10562140 5.6K\Omega \pm 10\% ¼W, Carbon Film
                                                               R 104
         51140305E9
                       O. C. H. M Screw
D168
                                                                        RT10152140 1.5K\Omega \pm 10\% \frac{1}{4}W, Carbon Film
                                                               R 105
         53112603E0
                       Hexagon Nut
D171
                                                                        RT10123140 1.3KΩ \pm 10\% ¼ W, Carbon Film
RT10272140 2.7KΩ \pm 10\% ¼ W, Carbon Film
RT10222140 2.2KΩ \pm 10\% ¼ W, Carbon Film
                                                               R106
                       Hexagon Nut
D172
         53112603E0
                                                               R 107
D173
         53112603E0
                       Hexagon Nut
                                                               R 108
D174
         53112603E0
                       Hexagon Nut
                                                                        RT10393140 39K\Omega ±10% \frac{1}{4}W, Carbon Film
                                                               R109
         53110303E9
                       Hexagon Nut
D176
                                                                        RT10562140 5.6K\Omega \pm 10\% ¼W, Carbon Film
                                                               R110
D177
         53110303E9
                       Hexagon Nut
                                                                        RT10222140 2.2K\Omega \pm 10\% ¼W, Carbon Film RT10272140 2.7K\Omega \pm 10\% ¼W, Carbon Film
                                                               R111
D180
         53110403E9
                       Hexagon Nut
                                                               R112
D181
         53110403E9
                       Hexagon Nut
                                                                        RT10152140 1.5 \text{K}\Omega \pm 10\% \frac{1}{4} \text{W}, Carbon Film
                                                               R113
D182
         53110403E9
                       Hexagon Nut
                                                                        RT10823140 82K\Omega ±10% ¼W, Carbon Film
                                                               R114
         53110403E9
                       Hexagon Nut
D183
                                                                        RT10124140 120K\Omega \pm 10\% ¼W, Carbon Film
                                                               R115
D184
         53110403E0
                       Hexagon Nut
                                                                        RT10472140 4.7K\Omega ±10% \frac{1}{2}W, Carbon Film
                                                               R116
                       Washer
D185
         59030810P0
                                                                                              ±10% ¼ W, Carbon Film
                                                               R117
                                                                        RT10221140 220\Omega
D186
         59030810P0
                       Washer
                                                                                              ±10% ¼ W, Carbon Film
                                                                        RT10103140 10KΩ
                                                               R118
         59030810P0
                       Washer
D187
                                                                                              ±10% 1/4 W, Carbon Film
                                                               R119
                                                                        RT10223140 22KΩ
D188
         59030810P0
                       Washer
                                                                                              \pm 10\% \ \frac{1}{4} \ W, Carbon Film
                                                                        RT10102140
                                                                                      1 \mathbf{K} \Omega
                                                               R 120
D189
         59030810P0
                       Washer
                                                                                              ±10% ¼ W, Carbon Film
                                                                        RT10391140
                                                                                      390 \Omega
                                                               R121
         59030810P0
                       Washer
D190
                                                                        RT10123140 12KΩ
                                                                                              ±10% ¼ W, Carbon Film
                                                               R122
D191
         53110603E0
                       Washer
                                                                                              ±10% ¼ W, Carbon Film
                                                               R123
                                                                        RT10103140 10KΩ
                       T. H. M Screw
D201
         51122608E0
                                                                                              \pm 10\% ¼ W, Carbon Film
                                                               R124
                                                                        RT10102140
                                                                                      1 K\Omega
D202
         51122608E0
                       T. H. M Screw
                                                                        RT10223140
                                                                                      22K\Omega
                                                                                              ±10% ¼ W, Carbon Film
                                                               R125
         51100406S9
                       B. H. M Screw
D206
                                                                                              \pm 10\% \ \frac{1}{4} \ W, Carbon Film
                                                               R126
                                                                        RT10151140
                                                                                      150\Omega
D 207
         51100406S9
                       B. H. M Screw
                                                                                      8.2K\Omega ±10% ¼W, Carbon Film
                                                                        RT10822140
                                                               R127
         51100406S9
                       B. H. M Screw
D208
                                                                                      6.8 \text{K}\Omega \pm 10\% \frac{1}{4} \text{W}, Carbon Film
                                                               R128
                                                                        RT10682140
D 209
         51100406S9
                       B. H. M Screw
                                                                                              ±10% ¼ W, Carbon Film
                                                                        RT10102140
                                                                                      1 K\Omega
                                                               R129
                       T. L Washer OR
D211
         54052600R0
                                                                                              ±10% ¼ W, Carbon Film
                                                               R130
                                                                        RT10271140
                                                                                      270\Omega
                       T. L Washer OR
D212
         54052600R0
                                                                                      6.8 \text{K}\Omega \pm 10\% \frac{1}{4} \text{W}, Carbon Film
                                                                        RT10682140
                                                               R131
D213
         54050300R0
                       T. L Washer OR
                                                                                              ±10% ½W, Solid
                                                               R132
                                                                        RC10221120
                                                                                      220\Omega
         54050400R0
                       T. L Washer OR
D214
                                                                        RT10101140 100Ω
                                                                                              \pm\,10\% ¼ W, Carbon Film
                                                               R133
D216
         54040302N0
                        Spring Washer
                                                                                               ±10% ¼W, Carbon Film
                                                               R134
                                                                        RT10471140
                                                                                      470\Omega
                        Spring Washer
D217
         54040302N0
                                                                                      3.9 \, \mathrm{K}\Omega \, \pm 10\% \, \frac{1}{4} \, \mathrm{W}, Carbon Film
                                                                        RT10392140
                                                               R135
         54040402N0
                        Spring Washer
 D220
                                                                        RT10332140 3.3K\Omega ±10% ¼W, Carbon Film
                                                               R136
                        Spring Washer
 D221
         54040402N0
                                                                        RT10222140 2.2K\Omega \pm 10\% ¼W, Carbon Film
                                                               R137
                        Spring Washer
 D222
         54040402N0
                                                                        RT10102140 1KΩ
                                                                                               ±10% ¼ W, Carbon Film
                                                               R138
                        Spring Washer
 D223
         54040402N0
                                                                                               \pm 10\%~ \frac{1}{4}\, W, Carbon Film
                                                               R139
                                                                        RT10102140 1KΩ
 D224
         54040402N0
                        Spring Washer
                                                                         RT10682140 6.8K\Omega \pm 10\% \% W, Carbon Film
                                                               R140
                        Spring Washer
 D225
         54040402N0
                                                                         RT10682140 6.8K\Omega \pm 10\% ¼W, Carbon Film
                                                               R141
         54040402N0
                        Spring Washer
 D226
                                                                                               \pm 10\% ¼ W, Carbon Film \pm 10\% ¼ W, Carbon Film
                                                               R142
                                                                         RT10101140
                                                                                      100\Omega
 D227
          54040402N0
                        Spring Washer
                                                               R143
                                                                         RT10221140
                                                                                      220\Omega
                        Spring Washer
 D228
         54040402N0
                                                                                               \pm 10\% \ \frac{1}{4} \, W, Carbon Film
                                                               R144
                                                                         RT10105140
                                                                                      1M\Omega
 D231
          62031650W0
                        Lug
                                                                                      1.5 \text{K}\Omega \pm 10\% \frac{1}{4} \text{W}, Carbon Film
                                                                R145
                                                                         RT10152140
          62041760W0
 D232
                        Lug
                                                                                               \pm 10\% ¼ W, Carbon Film
                                                                R146
                                                                         RT10102140
                                                                                      1K\Omega
                        Spring Washer
 D241
          54040602B0
                                                                                               ±10% ¼ W, Carbon Film
                                                                R 147
                                                                         RT10103140
                                                                                      10K\Omega
                        T. L Washer OR
          54050400R0
 D250
                                                                                      3.3 K\Omega \pm 10\% \frac{1}{4} W, Carbon Film
                                                                         RT10332140
                                                                R148
                        Flat Washer P
 D253
          54020401S0
                                                                         RT10823140
                                                                                      82K\Omega
                                                                                               ±10% ¼ W, Carbon Film
                                                                R149
                        Flat Washer P
 D254
          54020401S0
                                                                                               ±10% ¼ W, Carbon Film
                                                                         RT10821140
                                                                                      820Q
                                                                R 150
 D 255
          54020401S0
                        Flat Washer P
                                                                                       2.2K\Omega \pm 10\% \frac{1}{4}W, Carbon Film
                                                                         RT10222140
                                                                R151
                        Flat Washer P
 D256
          54020401S0
                                                                                       22K\Omega \pm 10\% \frac{1}{4}W, Carbon Film
                                                                         RT10223140
                                                                R152
 D 258
          62041760W0
                        Lug
                                                                         RT10331140
                                                                                       330\Omega
                                                                                               ±10% ¼ W, Carbon Film
                                                                R 153
 D261
          51640412D9
                        Set Screw C. P
                                                                                       1.2 \mathrm{K}\Omega ~\pm 10\%~ \frac{1}{4} \mathrm{W}, \mathrm{Carbon~Film}
                                                                         RT10122140
                                                                R154
          51650304D9
                        Set Screw H. P
 D263
                                                                                               \pm 10\% \ \frac{1}{4} \, W, Carbon Film
                                                                R 155
                                                                         RT10103140
                                                                                       10K\Omega
          51650304D9
                        Set Screw H. P
 D264
                                                                                               ±10% 1/4 W, Carbon Film
                                                                                       10K\Omega
                                                                R 156
                                                                         RT10103140
                        RG Ring E
          64002400R0
 D267
                                                                R 157
                                                                         RT10103140
                                                                                       10 \mathbf{K} \Omega
                                                                                               ±10% ¼ W, Carbon Film
                        RG Ring E
 D268
          64002400R0
                                                                                               \pm 10\% \ \frac{1}{4} \, \text{W}, Carbon Film
                                                                                       10K\Omega
                                                                R158
                                                                         RT10103140
          64002400R0
                        RG Ring E
 D269
                                                                                               \pm 10\% ¼W, Carbon Film \pm 10\% ¼W, Carbon Film
                                                                R159
                                                                         RT10683140
                                                                                       68K\Omega
 D270
          64002400R0
                        RG Ring E
                                                                R 160
                                                                         RT10683140
                                                                                       68K\Omega
 D271
          56382040G0
                        Eyelet
                                                                                               ±10% ¼ W, Carbon Fiim
                                                                         RT10683140 68KΩ
                                                                R161
          59030810P0
                        Washer
 D274
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| REF.<br>DESIG. | MARANTZ<br>PART NO.      | DESCRIPTION  | REF.<br>DESIG. | MARANTZ<br>PART NO.      | DESCRIPTION  |
|----------------|--------------------------|--|----------------|--------------------------|--|
| R 162          | RT10683140               | 68KΩ ±10% ¼ W, Carbon Fiim   | C 152          | EA47501620               | 16V 4.7μF +100%-20% Elect.   |
| R 163          | RT10823140               | 82KΩ ±10% ¼ W, Carbon Film   | C 153          | DD16201010               | $200$ pF $\pm 20\%$ Car.   |
| R 164          | RT10823140               | 82KΩ ±10% ¼ W, Carbon Film   | C 154          | DD16201010               | $200 \mathrm{pF}$ $\pm 20\%$ Car.  |
| R 167<br>R 168 | RT10105140               | $1MΩ$ $\pm 10\% \frac{1}{4}W$ , Carbon Film  | C 155          | DD16201010               | 200pF ±20% Car.  |
| R 169          | RT10105140<br>RT10152140 | $1M\Omega$ $\pm 10\% \frac{1}{4}$ W, Carbon Film $1.5 \text{ K}\Omega \pm 10\% \frac{1}{4}$ W, Carbon Film             | C 156<br>C 157 | EA47501620               | $16\text{V }4.7\mu\text{F} + 100\% - 20\%$ Elect.  |
| R 170          | RT10152140               | 1.5 K $\Omega \pm 10\%$ ¼ W, Carbon Film   | C 157          |                          | $0.04 \mu F + 100\% - 0\%$ Ccr.<br>$16V 10 \mu F + 100\% - 20\%$ Elect.                      |
| R171           | RT10562140               | 5.6 K $\Omega$ ±10% ¼ W, Carbon Fiim   | C 159          | DF55472010               | $4700 pF \qquad \pm 5\% \qquad Mylar$  |
| R172           | RT10562140               | 5.6 KΩ ±10% ¼W, Carbon Fiim  | C 160          | DF17472010               |  |
| R173           | RT10562140               | 5.6 KΩ ±10% ¼W, Carbon Fiim  | C 161          | DK17103010               | $0.01\mu\mathrm{F}$ $\pm 20\%$ Cer.  |
| R 174          | RT10562140               | 5.6 K $\Omega$ ±10% ¼W, Carbon Film  | C 162          | DF55472010               | 4700pF $\pm 5\%$ Mylar   |
| R 175<br>R 176 | RT10563140<br>RT10563140 | $56$ KΩ $\pm 10\%$ ¼ W, Carbon Fiim $56$ KΩ $\pm 10\%$ ¼ W, Carbon Fiim  | C 163          | DF55472010               | - ·  |
| R 182          | RA05020050               | 56K $\Omega$ $\pm 10\%$ ¼ W, Carbon Film<br>5K $\Omega$ (B) $\pm 20\%$ Semi Fixed                                      | C 164<br>C 165 | EA10601620               |  |
| C 101          | DD12100010               | 10pF ±1pF Cer.   | C 166          | EA47501620<br>DF16152010 | $16\text{V }4.7\mu\text{ F }+100\%-20\%\text{ Elect.}$ $1500$ pF $\pm10\%$ Mylar             |
| C 102          | DD12030010               | 3pF ±1pF Cer.  | C 167          | EA47501620               | $16V 4.7 \mu F + 100\% - 20\%$ Elect.  |
| C 103          | DK17102010               | $0.001 \mu F \pm 20\%$ Cer.  | C 168          | EA47501620               | $16V 4.7 \mu F + 100\% - 20\%$ Elect.  |
| C 104          | DK17102010               | $0.001 \mu F \pm 20\%$ Cer.  | C 169          |                          | $16V 4.7 \mu F + 100\% - 20\%$ Elect.  |
| C 105          | DD16150010               | 15pF ±10% Cer.   | C170           | EA47501620               | $16V 4.7 \mu F + 100\% - 20\%$ Elect.  |
| C 106          | DD12050010               | 5pF ±1pF Cer.  | C 171          | DF16562010               | $0.0056 \mu F \pm 10\%$ Mylar  |
| C 107<br>C 108 | DD15301010<br>DD11020040 | $300 pF$ $\pm 5 \%$ Cer.<br>$2pF$ CH $\pm 0.5pF$ Cer.  | C172           | DF16562010               | $0.0056 \mu F \pm 10\%$ Mylar  |
| C 108          | DK17102010               | $0.001\mu F$ $\pm 20\%$ Cer.   | C 173          | DD16201010               | 200pF ±20% Cer.  |
| C110           | DD15500010               | $50pF$ $\pm 5\%$ Cer.  | C 174<br>C 175 | EA47501620<br>EA47501620 | $16V4.7\mu F + 100\% - 20\%$ Elect.  |
| C111           | DD16501010               | 500pF ±10% Cer.  | C 176          | DF16332010               | $16 \text{V } 4.7 \mu\text{F } + 100\% - 20\%$ Elect.<br>$0.0033 \mu\text{F} \pm 10\%$ Mylar |
| C112           | DK17103010               | $0.01\mu\mathrm{F}$ $\pm 20\%$ Cer.  | C 177          | DF16332010               | $0.0033\mu$ F $\pm 10\%$ Mylar $0.0033\mu$ F $\pm 10\%$ Mylar                                |
| C113           | DK17102010               | $0.001 \mu F \pm 20\%$ Cer.  | C178           | DF65322010               | $0.0032 \mu F \pm 5\%$ Mylar   |
| C114           | DD12070030               | 7pF CH ±1pF Cer.   | C 179          | DF65322010               | $0.0032 \mu F \pm 5\%$ Mylar   |
| C115           | DD16150050               | 15pF N470 ±10% Cer.  | C 180          | DF16332010               | $0.0033 \mu \text{F} \pm 10\%$ Mylar   |
| C 116<br>C 117 | DK18403010<br>DF17223010 | $0.04 \mu F + 100\% - 20\%$ Cer.<br>$0.02 \mu F \pm 20\%$ Mylar  | C 181          | DF16332010               | $0.0033 \mu F \pm 10\%$ Mylar  |
| C117           | DF17223010<br>DF17153010 | $0.02\mu$ F $\pm 20\%$ Mylar $0.015\mu$ F $\pm 20\%$ Mylar   | C 182          | DF65821010               | 820pF $\pm 5\%$ Mylar  |
| C119           | DD12100010               | $10 \text{pF}$ $\pm 10\%$ Cer.   | C 183<br>C 184 | DF65821010<br>CT11300010 | 820pF ± 5 % Mylar<br>Trimmer   |
| C120           | DF65391010               | $390 pF \pm 5\%$ Mylar   | C 185          | CT11300010               | Trimmer<br>Trimmer   |
| C 121          | DK18403010               | $0.04 \mu F + 100\% - 0\%$ Cer.  | C 188          | CA32000100               | Variable FM3G, AM2G  |
| C122           | EA33600610               | $6V30\mu F + 100\% - 20\%$ Elect.  | C 190          | CT11000010               | Trimmer  |
| C 123          | DK18403010               | $0.04\mu F + 100\% - 0\%$ Cer.   | H 101          | HF200191A0               | FET 2SK19Y(B)  |
| C 124<br>C 125 | DD10010010<br>DK17103010 | $\begin{array}{lll} 1 { m pF} & \pm 0.25\% & { m Cer.} \ 0.01 \mu { m F} & \pm 20\% & { m Cer.} \end{array}$           | H102           |                          | Transistor 2SC829 (B)  |
| C 126          | DK17103010               | $0.01\mu$ F $\pm 20\%$ Cer.  | H 103          | HT308291B0               | Transistor 2SC829 (B)  |
| C 127          | DD10010010               | $1pF 	 \pm 0.25\% 	 Cer.$  | H 104<br>H 105 |                          | Transistor 2SC380 (O) Transistor 2SC829 (D)  |
| C128           |                          | $0.01\mu F \pm 20\%$ Cer.  | H 105          |                          | Transistor 2SC829 (D)  |
| C129           | DK17103010               |  | H 107          |                          | IC TA7060P   |
| C130           | DK17103010               | $0.01\mu\mathrm{F}$ $\pm 20\%$ Cer.  | H108           | HD10001050               | Diode 1N60   |
| C 131          | DK17103010               | $0.01\mu F \pm 20\%$ Cer.  | H 109          | HD10001050               | Diode 1N60   |
| C 132<br>C 133 | DD10010010<br>DD16300010 | $\begin{array}{lll} 1 \mathrm{pF} & \pm 20\% & \mathrm{Cer.} \\ 30 \mathrm{pF} & \pm 20\% & \mathrm{Cer.} \end{array}$ | H110           | HD10001050               |  |
| C 134          | DD16501010               | $500$ pF $\pm 10\%$ Cer.   | H111           | HD10001050               |  |
| C135           | DK17103010               | $0.01\mu F \pm 20\%$ Cer.  | H112<br>H113   | HD10001050               |  |
| C 136          | DK17103010               | $0.01\mu\mathrm{F}$ $\pm 20\%$ Cer.  | H114           |                          | Transistor 2SC371 (O) Transistor 2SC371 (R)  |
| C 137          | DD15301010               | $300 \mathrm{pF} \pm 5 \%$ Cer.  | H115           | HD10001050               |  |
| C 138          | DK18403010               | $0.04 \mu F + 100\% - 0\%$ Cer.  | H116           |                          | Transistor 2SC733 (Gn)   |
| C139           | DK18403010               | $0.04\mu F + 100\% - 0\%$ Cer.   | H117           | HT30373100               | Transistor 2SC373  |
| C 140<br>C 142 | DK17502010<br>EA22701640 | $0.005 \mu F \pm 20\%$ Cer $16V 220 \mu F + 100\% - 20\%$ Elect.   | H118           | HT30373100               | Transistor 2SC373  |
| C142<br>C143   | DF17103010               |  | H119           | HT30373100               | Transistor 2SC373  |
| C 144          | DK17103010               |  | H 120<br>H 121 | HT30373100<br>HD10001010 | Transistor 2SC373<br>Diode 1N34A   |
| C 145          |                          |  | H 121          | HD10001010               |  |
| C 146          | DK17103010               |  | H 123          | HD10001010               | Diode 1N34A  |
| C148           | DF17472010               | $0.0047 \mu 	ext{F} \pm 20\%$ Mylar  | H124           | HD10001010               |  |
| C149           |                          | $0.04 \mu F + 100\% - 0\%$ Cer.  | H125           | HD10001010               | Diode 1N34A  |
| C150           | DF17222010               |  | H126           | HD10001010               |  |
| C151           | DF17403010               | $0.04 \mu \text{F}$ $\pm 20\%$ Mylar   | H127           | HT306442A0               | Diode $2SC644 (S) or (T)$  |

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REF.
        MARANTZ
                                                             REF.
                                                                     MARANTZ
                                                                                           DESCRIPTION
DESIG. PART NO.
                              DESCRIPTION
                                                            DESIG. PART NO.
        HT306442A0 Diode
                                  2SC644 (S) or (T)
                                                            J 203
                                                                     YP10000360 Plug
H128
        LA10046060 FM Ant Coil
L101
                                                            J 204
                                                                     YP10000360
                                                                                  Plug
                                                                                  Plug
                                                            J 205
                                                                     YP10000360
L102
        LK10505060 FM RF Coil
        LL23505050 FM RF Coil
L103
                                                            J 206
                                                                     YP10000360
                                                                                  Plug
        LO12026010 FM OSC
                                                                     YP10000360
L104
                                                             J 207
                                                                                   Plug
        LC16820010 Choke Coil 6.8 µH
                                                            P300
                                                                     YD27660030
                                                                                  Phono Amp. P.C Board
L105
                                                                     RT10102140
L106
        LC16810010
                      Choke Coil 0.68 µH
                                                            R301
                                                                                  1 \mathbf{K} \Omega
                                                                                          ±10% ¼W, Carbon Film
                                                                                          ±10% ¼ W, Carbon Film
±10% ¼ W, Carbon Film
                                                            R 302
                                                                     RT10102140
                                                                                  1 \mathbf{K} \Omega
        LI14016150 FM IFT (1)
L107
                      FM IFT (2)
                                                            R303
                                                                     RT10473140
                                                                                  47 K\Omega
L108
        LI14016170
                      FM IFT (3)
                                                                                         ±10% ¼ W, Carbon Film
                                                            R304
                                                                     RT10473140
                                                                                  47 K\Omega
L109
        LI14016170
                      FM IFT (4)
                                                            R 305
                                                                     RN10154140
                                                                                  150K\Omega ±10% \frac{1}{4}W, Carbon Film
        LI14016180
L110
                                                                     RN10154140
                                                                                  150\,\mathrm{K}\Omega~\pm10\%~\frac{1}{2}\,\mathrm{W}, Carbon Film
        LI14016043 FM IFT (5)
                                                            R306
L111
        LO10010340 AM OSC Coil
                                                            R307
                                                                     RT10331140
                                                                                  330\Omega
                                                                                          ±10% ¼ W, Carbon Film
L112
                                                                                          ±10% 1/4 W, Carbon Film
                                                            R 308
                                                                     RT10331140
L113
        LI14010020
                      AM IFT (1)
                                                                                  330\Omega
        LI10010120 AM IFT (2)
                                                                     RN10224140
                                                                                  220\,K\Omega~\pm10\%~\frac{1}{2}W,~Carbon~Film
                                                            R 309
L114
                                                                     RN10224140
                                                                                  220\,\mathrm{K}\Omega~\pm10\%~\frac{1}{2}\,\mathrm{W},~\mathrm{Carbon}~\mathrm{Film}
L115
        LI10010480
                      AM IFT (3)
                                                            R310
                                                                     RT10821140
                                                                                  820\Omega
                                                                                          \pm 10\% ¼ W, Carbon Film
                      MPX Coil 19KHz
                                                            R311
L116
        LS10015020
L117
        LS10015030
                      MPX Coil 19KHz Doublar
                                                            R312
                                                                     RT10821140
                                                                                  820\Omega
                                                                                          ±10% ¼ W, Carbon Film
                                                                     RN10153140
                                                                                  15K\Omega ±10% ¼W, Carbon Film
                      MPX Coil 38KHz
                                                            R313
L118
        LS10015040
        LS10010050 MPX Coil 67KHz
                                                            R314
                                                                     RN10153140
                                                                                  15K\Omega
                                                                                          ±10% ¼ W, Carbon Film
L119
                                                                                          \pm~5~\%~\frac{1}{2}W, Carbon Film
                                                            R315
                                                                     RT05153140
                                                                                  15K\Omega
L120
        LC22260010 Choke Coil 22mH
                                                                                          ±5% ¼W, Carbon Film
        LC22260010 Choke Coil 22mH
                                                            R316
                                                                     RT05153140
                                                                                  15K\Omega
L121
                                                                                  180 \, \mathrm{K}\Omega \, \pm 5 \% \, \frac{1}{4} \, \mathrm{W}, Carbon Film
L122
        LC22260010
                      Choke Coil 22mH
                                                            R317
                                                                     RT05184140
                                                            R318
                                                                     RT05184140
                                                                                  180\,\mathrm{K}\Omega~\pm5\,\%\,\mathrm{rac{1}{4}}\,\mathrm{W}, Carbon Film
        LC22260010 Choke Coil 22mH
L123
                                                                                  220 K \Omega \pm 10% \frac{1}{4} W, Carbon Film
220 K \Omega \pm 10% \frac{1}{4} W, Carbon Film
8.2 K \Omega \pm 10% \frac{1}{4} W, Carbon Film
                                                                     RN10224140
        YP10000360 Plug
                                                            R319
J 101
                                                            R320
                                                                     RN10224140
        YP10000360 Plug
J 102
                                                            R321
                                                                     RT10822140
J 103
        YP10000360
                      Plug
                                                            R322
                                                                     RT10822140 8.2K\Omega ±10% \frac{1}{4}W, Carbon Film
J 104
         YP10000360 Plug
                                                                     EV33502510 3.3\muF 25V +40\%-20\% Elect.
                                                             C 301
J 105
        YP10000360 Plug
                                                            C302
                                                                     EV33502510 3.3\mu F 25V + 40\% - 20\% Elect.
 J 106
        YP10000360 Plug
        YP10000360 Plug
                                                             C 303
                                                                     DF16183010
                                                                                  0.018 \mu \, \text{F} \, 50 \text{V} \, \pm 10\% \, \text{Mylar}
 J 107
                                                            C 304
                                                                     DF16183010 0.018 \mu F 50V \pm 10\% Mylar
 J 108
         YP10000360
                      Plug
                                                             C305
                                                                     DF16472010
                                                                                   4700pF 50V ±10% Mylar
 J 109
         YP10000360 Plug
                                                             C 306
                                                                                   4700 pF 50V \pm 10\% Mylar
                                                                     DF16472010
         YP10000360 Plug
 J 110
                                                                                  50pF 50V ±10% Cer.
50pF 50V ±10% Cer.
                                                             C 307
                                                                     DD16500010
 J 111
         YP10000360 Plug
                                                             C308
                                                                     DD16500010
         YP10000360
                      Plug
 J 112
                                                                     EA33600610
                                                                                   33\mu F 6 V + 100\% - 0\% Elect.
                                                             C309
 J 113
         YP10000360
                      Plug
                                                                     EA33600610
                                                                                   33\mu F 6 V + 100\% - 0\%
                                                             C310
                                                                                                           Elect.
         YP10000360 Plug
 J 114
                                                                                   0.47 \mu F 25V + 40\% - 20\% Elect.
                                                                     EV47402510
                                                             C313
                      Plug
 J 115
         YP10000360
                                                                                   0.47 \mu F 25V + 40\% - 20\% Elect.
                                                             C314
                                                                     EV47402510
 J 116
         YP10000360
                      Plug
                                                             C315
                                                                     EA22702510
                                                                                   220\mu F 25V +100%-0% Elect.
 J 117
         YP10000360
                      Plug
                                                                                  220\mu F 25V +100%-0% Elect.
                                                             C316
                                                                     EA22702510
                      Plug
 J 118
         YP10000360
                                                             J 301
                                                                     YP10000360
                                                                                   Plug
 J 119
         YP10000360
                      Plug
                                                             J 302
                                                                     YP10000360
                                                                                   Plug
         YP10000360
                      Plug
 J 120
                                                                                   Plug
                                                             J 303
                                                                     YP10000360
 J 121
         YP10000360
                       Plug
                                                             J 304
                                                                     YP10000360
                                                                                   Plug
 J 122
         YP10000360
                      Plug
                                                             J 305
                                                                     YP10000360
                                                                                   Plug
 P200
                       Meter Amp. P.C Board
         YD26110022
                                                             J 306
                                                                     YP10000360
                                                                                   Plug
 H201
         HT303801B0 Transistor 2SC380 (O)
                                                             J 307
                                                                     YP10000360
                                                                                   Plug
 H 202
                                     1N60
         HD10001050 Diode
                                                                     HT306441B0 Transistor
                                                             H301
                                                                                                 2SC644 (S)
 H 203
         HD10001050
                       Diode
                                     1N60
                                                                     HT306441B0 Transistor
                                                             H302
                                                                                                 2SC644 (S)
                      IFT 10.7MHz Amp.
 L201
         LI10156060
                                                             H303
                                                                     HT306441A0 Transistor
                                                                                                 2SC644 (R)
                      22K\Omega
                              ±10% ¼ W, Carbon Film
 R 201
         RT10223140
                                                             H304
                                                                     HT306441A0 Transistor
                                                                                                 2SC644 (R)
                                \pm 10\%~ \frac{1}{4}\, W, Carbon Film
                      10K\Omega
 R 202
         RT10103140
                                                             P400
                                                                     YD27660040 Pre & Main Amp. P.C Board
                               ±10% ¼ W, Carbon Film
±10% ¼ W, Carbon Film
 R 203
         RT10102140
                      1 \mathbf{K} \Omega
                                                             R401
                                                                     RT10102140 1K\Omega ±10% \frac{1}{4}W, Carbon Film
 R 204
         RT10272140
                       2.7 K\Omega
                                                             R402
                                                                     RT10102140 1K\Omega ±10% ¼W, Carbon Film
                                ±10% ¼ W, Carbon Film
 R 205
         RT10392140 3.9KΩ
                                  ±20%
                                                             R403
                                                                                   470 K \Omega \pm 10\% ¼ W, Carbon Film
                                                                     RN10474140
 C 201
         DK17103010 0.01μF
                                           Cer.
                                                                     RN10474140
                                                                                            ±10% ¼W, Carbon Film
                                  ±20%
                                                             R404
                                                                                   470 KΩ
 C 202
         DD16201010
                       200pF
                                            Cer.
                       0.04 \mu F + 100\% - 0\% Cer.
                                                                     RN10224140
                                                                                            ±10% ¼W, Carbon Film
                                                             R405
                                                                                   220 KΩ
 C 203
         DK18403010
                       0.04 \mu F + 100\% - 0\% Cer.
                                                             R406
                                                                     RN10224140
                                                                                   220 K Ω
                                                                                           ±10% ¼W, Carbon Film
 C 204
         DK18403010
                                                                                            \pm~5~\%~1/4~W, Carbon Film
         DK18403010 0.04 \mu F + 100\% - 0\% Cer.
                                                             R 407
                                                                     RT05331140
                                                                                   330\Omega
 C 205
         YP10000360 Plug
                                                             R408
                                                                     RT05331140
                                                                                   330\Omega
                                                                                            ±5% ¼W, Carbon Film
 J 201
                                                             R409
                                                                                            ±5% 1/4W, Carbon Film
                                                                      RT05103140 10KΩ
 J 202
         YP10000360 Plug
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| REF.           | MARANTZ                  |                             | DEC CRIPTION                                 | REF.           | MARANTZ                  |  |
|----------------|--------------------------|-----------------------------|--|----------------|--------------------------|--|
| DESIG.         | PART NO.                 |                             | DESCRIPTION                                  | DESIG.         | PART NO.                 | DESCRIPTION  |
| D 410          | DT05100140               | 10770                       | 1 F 0/ 1/W C 1 - E1                          | D 472          | D C10000100              | 000 100/1/W C 1:1  |
| R410           | RT05103140               | 10ΚΩ<br>6.8ΚΩ               | ±5% ¼W, Carbon Film                          | R 473          | RC10220120               | $22\Omega$ $\pm 10\%$ ½ W, Solid   |
| R411           | RT10682140               |                             | ±10% ¼W, Carbon Film                         | R474           | RC10220120               | 22Ω ±10% ½ W, Solid  |
| R412           | RT10682140<br>RT10681140 | 6.8KΩ                       | ±10% ¼W, Carbon Film                         | R475           | GW10502020               | , ,  |
| R 413          |                          | 680Ω                        | ±10% ¼W, Carbon Film                         | R 476          | GW10502020               | ,  |
| R414           | RT10681140               | 680Ω<br>470Ω                | ±10% ¼W, Carbon Film                         | R477           | GW10502020               |  |
| R 415<br>R 416 | RT10471140<br>RT10471140 | $470\Omega$ $470\Omega$     | ±10% ¼W, Carbon Film<br>±10% ¼W, Carbon Film | R 478          | GW10502020               |  |
| R416<br>R417   | RT10822140               | 8.2KΩ                       | ±10% ¼ W, Carbon Film                        | C 401<br>C 402 | DF17224020<br>DF17224020 | $0.22 \mu F 50V \pm 20\%$ Mylar $0.22 \mu F 50V \pm 20\%$ Mylar                              |
| R418           | RT10822140               | 8.2KΩ                       | ±10% ¼W, Carbon Film                         | C 402          | DD16200010               | $20 \text{pF}$ $50 \text{V}$ $\pm 20 \%$ Mylar $20 \text{pF}$ $50 \text{V}$ $\pm 10 \%$ Cer. |
| R419           | RT10682140               | 6.8KΩ                       | ±10% ¼W, Carbon Film                         | C 404          | DD16200010               | $20 pF$ $50 V$ $\pm 10 \%$ Cer.  |
| R 420          | RT10682140               | 6.8KΩ                       | ±10% ¼W, Carbon Film                         | C 405          | EA10602510               | $10\mu \text{F } 25\text{V} + 100\% - 0\%$ Elect.  |
| R421           | RT10102140               | 1ΚΩ                         | ±10% ¼W, Carbon Film                         | C 406          | EA10602510               | $10\mu \text{F} 25\text{V} + 100\% - 0\%$ Elect.   |
| R422           | RT10102140               | 1ΚΩ                         | ±10% ¼W, Carbon Film                         | C 407          | EA33601010               | 33μF 10V Elect.  |
| R423           | RT10101140               | $100\Omega$                 | ±10% ¼W, Carbon Film                         | C 408          | EA33601010               | 33μF 10V Elect.  |
| R 424          | RT10101140               | $100\Omega$                 | ±10% ¼W, Carbon Film                         | C 409          | EV33502510               | $3.3\mu \text{F } 25\text{V} + 40\% - 20\%$ Elect.   |
| R425           | RT10221140               | $220\Omega$                 | ±10% ¼W, Carbon Film                         | C410           | EV33502510               | $3.3\mu \text{F } 25\text{V} + 40\% - 20\%$ Elect.   |
| R426           | RT10221140               | <b>220</b> Ω                | ±10% ¼W, Carbon Film                         | C411           | EA22702520               |  |
| R 427          | RT10222140               | $2.2K\Omega$                | ±10% ¼W, Carbon Film                         | C412           | EA22702520               |  |
| R428           | RT10222140               | $2.2K\Omega$                | ±10% ¼W, Carbon Film                         | C413           | DF17332010               | $0.0033 \mu \text{F} 50 \text{V} \pm 20\%$ Mylar   |
| R 429          | RT10104140               | $100  \mathrm{K}\Omega$     | ±10% ¼W, Carbon Film                         | C414           | DF17332010               |  |
| R430           | RT10104140               | <b>100Κ</b> Ω               | ±10% ¼W, Carbon Film                         | C415           | EV47402510               | $0.47 \mu \text{F} 25\text{V} + 40\% - 20\%$ Elect.  |
| R431           | RN10154140               | $150 \mathrm{K}\Omega$      | ±10% ¼W, Carbon Film                         | C416           | EV47402510               | $0.47 \mu \text{F} 25\text{V} + 40\% - 20\%$ Elect.  |
| R 432          | RN10154140               | $150 \mathrm{K}\Omega$      | ±10% ¼W, Carbon Film                         | C417           | EA47601630               | $47 \mu F$ 16V +100%-0% Elect.   |
| R 433          | RT10821140               | $820\Omega$                 | ±10% ¼W, Carbon Film                         | C418           | EA47601630               | $47\mu$ F 16V +100%-0% Elect.  |
| R 434          | RT10821140               | <b>820</b> Ω                | ±10% ¼W, Carbon Film                         | C 419          | EA33601010               | $33\mu$ F 10V +100%-0% Elect.  |
| R 435          | RN10155140               | $1.5 M\Omega$               | ±10% ¼W, Carbon Film                         | C 420          | EA33601010               | $33\mu F$ 10V +100% -0% Elect.   |
| R 436          | RN10155140               | 1.5ΜΩ                       | ±10% ¼W, Carbon Film                         | C 421          | EA10701010               | $100 \mu F$ $10V$ $+100\%-0\%$ Elect.  |
| R 437          | RT10223140               | <b>22K</b> Ω                | ±10% ¼W, Carbon Film                         | C 422          | EA10701010               | $100 \mu F$ $10V$ $+100\%-0\%$ Elect.  |
| R 438          | RT10223140               | <b>22Κ</b> Ω                | ±10% ¼W, Carbon Film                         | C 423          | EA10603510               | $10\mu F$ 35V +100% -0% Elect.   |
| R 439          | RT10562140               | 5.6KΩ                       | ±10% ¼W, Carbon Film                         | C 424          | EA10603510               | $10\mu F$ 35V $+100\%-0\%$ Elect.  |
| R 440<br>R 441 | RT10562140<br>RT05392140 | $5.6 K\Omega$ $3.9 K\Omega$ | ±10% ¼W, Carbon Film<br>±10% ¼W, Carbon Film | C 425          | EA22702520               | $220\mu F$ $25V$ $+100\%-0\%$ Elect.   |
| R441<br>R442   | RT05392140               | 3.9KΩ                       | ±10% ¼W, Carbon Film                         | C 426<br>C 427 | EA22702520               | $220\mu F$ $25V$ $+100\%$ $-0\%$ Elect.  |
| R 443          | RT10821140               | 820Ω                        | ±10% ¼W, Carbon Film                         | C 427          | EA47603520<br>EA47603520 | $47 \mu F$ 35V +100% -0% Elect.<br>$47 \mu F$ 35V +100% -0% Elect.                           |
| R 444          | RT10821140               | <b>820</b> Ω                | ±10% ¼W, Carbon Film                         | C 429          | DD15400010               | $40 \text{pF} 50 \text{V} \pm 10\%$ Cer.   |
| R 445          | RT05101140               | 100Ω                        | ± 5% ¼W, Carbon Film                         | C 430          | DD15400010               | 40pF 50V ±10% Cer.   |
| R446           | RT05101140               | $100\Omega$                 | ± 5 % ¼ W, Carbon Film                       | C 431          | EA47603520               | $47 \mu \text{F}$ $35 \text{V}$ $+100\%-0\%$ Elect.  |
| R447           | RT10153140               | $15K\Omega$                 | ±10% ¼W, Carbon Film                         | C 432          | EA47603520               | $47 \mu F$ 35V $+100\%-0\%$ Elect.   |
| R448           | RT10153140               | $15K\Omega$                 | ±10% ¼W, Carbon Film                         | C 433          | EA10700610               | $100\mu F$ 6.3V + $100\%$ -0% Elect.   |
| R449           | RT10123140               | <b>12K</b> Ω                | ±10% ¼W, Carbon Film                         | C 434          | EA10700610               | $100\mu F$ 6.3V $+100\%-0\%$ Elect.  |
| R450           | RT10123140               | $12K\Omega$                 | ±10% ¼W, Carbon Film                         | C 435          | EA22603510               |  |
| R451           | RN10104140               | <b>100 K</b> Ω              | ±10% ¼W, Carbon Film                         | C436           | EA22603510               | $22\mu F$ 35V $+100\%-0\%$ Elect.  |
| R 452          | RN10104140               |                             | ±10% ¼W, Carbon Film                         | C 437          | EB22803520               |  |
| R 453          | RA01040060               | $100 \mathrm{K}\Omega$      | (B) Semi Fixed                               | C438           | EB22803520               | $2200 \mu F 35V + 100\% - 0\%$ Elect.  |
| R 454          | RA01040060               |                             | (B) Semi Fixed                               | C 439          | DF17104520               |  |
| R 455          | RA05010010               | 500Ω                        | (B) Semi Fixed                               | C 440          | DF17104520               |  |
| R456           | RA05010010               |                             | (B) Semi Fixed                               | C 443          | DD16101010               | $100$ pF $50$ V $\pm 10\%$ Cer.  |
| R457           | RC10331120               |                             | ±10% ½W, Solid                               | C 444          | DD16101010               | $100 pF$ $50V$ $\pm 10\%$ Cer.   |
| R458           | RC10331120               |                             | ±10% ½W, Solid                               | C 445          | DD16201010               |  |
| R 459<br>R 460 | RC10392120               |                             | ±10% ½W, Solid<br>±10% ½W, Solid             | C 446          | DD16201010               | •  |
| R461           | RC10392120<br>RT10101140 |                             | ±10% ½ W, Sond<br>±10% ¼ W, Carbon Film      | H 401<br>H 402 | HT304580Y0               |  |
| R 462          | RT10101140               |                             | ±10% ¼ W, Carbon Film                        | H 402<br>H 403 | HT304580Y0<br>HT307321B0 |  |
| R 463          | RT10822140               |                             | ±10% ¼W, Carbon Film                         | H 404          | HT307321B0               |  |
| R 464          | RT10822140               |                             | ±10% ¼W, Carbon Film                         | H 405          | HT30/321B0               |  |
| R 465          | RC10220120               |                             | ±10% ½W, Solid                               | H 406          | HT304580Y0               |  |
| R466           | RC10220120               |                             | ±10% ½ W, Solid                              | H 407          | HT303731O0               |  |
| R467           | RC10221120               |                             | ±10% ½ W, Solid                              | H 408          | HT303731O0               |  |
| R468           | RC10221120               |                             | ±10% 1/2 W, Solid                            | H 409          | HT309841B0               |  |
| R469           | RC10221120               |                             | ±10% ½W, Solid                               | H410           | HT309841B0               |  |
| R470           | RC10221120               |                             | ±10% ½ W, Solid                              | H411           | HT309841B0               |  |
| R471           | RC10220120               |                             | ±10% ½ W, Solid                              | H412           | HT309841B0               |  |
| R472           | RC10220120               | <b>22</b> Ω                 | ±10% ½ W, Solid                              | H413           | HT105651B0               | Transistor 2SA565B   |
|                |                          |                             |  |                |                          |  |

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REF.
                                                                  MARANTZ
       MARANTZ
REF.
                             DESCRIPTION
                                                          DESIG. PART NO.
                                                                                        DESCRIPTION
DESIG. PART NO.
H414
        HT105651B0 Transistor
                                   2SA565B
                                                          H 503
                                                                  HD20003010 Diode
                                                                                        HR-5A
                                                          H 504
                                                                  HD20003010
                                                                               Diode
                                                                                        HR-5A
        HV00007050
                                   S-3016R
H415
                     Varistor
                                   S-3016R
                                                          H 505
                                                                  HD20017070
                                                                               Diode
                                                                                        1S1071
H416
        HV00007050
                     Varistor
                                                          H 506
                                                                  HD20017070
                                                                               Diode
                                                                                        1S1071
H421
        HD20003010
                     Diode
                                   HR-5A
                                   HR-5A
                                                                  HD20017070
                                                                               Diode
                                                                                        1S1071
        HD20003010
                     Diode
                                                          H 507
H422
                                                                                        1S1071
                                                          H508
                                                                  HD20017070
                                                                               Diode
J 401
        YP10000360
                     Plug
                                                                  YD27600060
                                                                               P.C Board
        YP10000360
                     Plug
                                                          P600
J 402
                                                                               10K\Omega \pm 10\% ¼ W, Carbon Film
                                                          R601
                                                                  RT10103140
        YP10000360
                     Plug
J 403
                                                                                      ±10% 1/4 W, Carbon Film
        YP10000360
                                                          R602
                                                                  RT10103140
                                                                               10 \text{K}\Omega
                     Plug
J 404
                                                                  RT10122140 1.2K\Omega ±10% 1/4 W, Carbon Film
        YP10000360
                                                          R 603
J 405
                     Plug
                                                                               1.2 K\Omega \pm 10\% \ \frac{1}{4} \ W, Carbon Film 150 K\Omega \pm 10\% \ \frac{1}{4} \ W, Carbon Film
                                                          R604
                                                                  RT10122140
        YP10000360
J 406
                     Plug
        YP10000360
                     Plug
                                                          R 605
                                                                  RT10154140
J 407
                                                                  RT10154140 150K\Omega ±10% \frac{1}{4}W, Carbon Film
                                                          R606
J 408
        YP10000360
                     Plug
        YP10000360
                                                                  RT10103140 10K\Omega \pm 10\% ¼W, Carbon Film
                                                          R 607
                     Plug
J 409
                                                                                      ±10% 1/4 W, Carbon Film
                                                                  RT10103140 10KΩ
        YP10000360
                     Plug
                                                          R608
J 410
                                                                               0.033 µF
                                                                                         ±20% Mylar
        YP10000360
                                                          C 601
                                                                  DF17333010
                     Plug
J 411
                                                                                                  Mylar
        YP10000360
                                                          C602
                                                                  DF17333010
                                                                               0.033 \mu F
                                                                                          ±20%
 J 412
                     Plug
                                                          C 603
                                                                  DD16101010
                                                                               100pF
                                                                                          ±10%
                                                                                                  Cer.
        YP10000360
 J 413
                     Plug
                                                          C604
                                                                  DD16101010
                                                                               100pF
                                                                                          ±10%
                                                                                                  Cer.
        YP10000360
                     Plug
J 414
                                                                                          ±20%
                                                          C 605
                                                                  DF17333010 0.033 u F
                                                                                                  Mylar
 J 415
        YP10000360
                     Plug
                      Plug
                                                          C 606
                                                                  DF17333010
                                                                               0.033\mu F \pm 20\% Mylar
        YP10000360
 J 416
                                                                               Tape Mon/Stereo Push Switch
                      Plug
                                                          S 601
                                                                  SP04020012
         YP10000360
 J 417
        YP10000360
                                                           1\sim2
                      Plug
 J 418
                                                          J 601
                                                                  YP10000360 Plug
 J 419
        YP10000360
                      Plug
                                                                  YP10000360
                                                           J 602
                                                                               Plug
        YP10000360
                      Plug
 J 420
                                                          J 603
                                                                   YP10000360
                                                                               Plug
        YP10000360
                      Plug
 J 421
                                                                  YP10000360
                                                                               Plug
                                                          J 604
 J 422
         YP10000360
                      Plug
                      Plug
                                                           J 605
                                                                  YP10000360
                                                                               Plug
         YP10000360
 J 423
                      Plug
                                                           J 606
                                                                  YP10000360
                                                                               Plug
         YP10000360
 J 424
                                                                               Plug
        YP10000360
                                                           J 607
                                                                   YP10000360
 J 425
                      Plug
                                                          P700
                                                                               P.C Board
                                                                   YD25770070
         YP10000360
                      Plug
 J 426
                                                          H701
                                                                  HD20003010
         YP10000360
                      Plug
                                                                               Diode
                                                                                      HR-5A
 J 427
                                                          H702
                                                                  HD20003010 Diode
                                                                                       HR-5A
         YP10000360
 J 428
                      Plug
                                                          H703
                                                                  HD20003010
                                                                               Diode
                                                                                       HR-5A
         YP10000360
                      Plug
 J 429
                                                                                       HR-5A
 J 430
         YP10000360
                      Plug
                                                          H704
                                                                   HD20003010
                                                                               Diode
                                                                   RT10272140 2.7K\Omega ±10% ¼W, Carbon Film
                                                          R005
 J 431
         YP10000360
                      Plug
                                                           R 006
                                                                   RT10272140 2.7K\Omega \pm 10\% ¼W, Carbon Film
         YP10000360
                      Plug
 J 432
                                                                                       \pm 10\% \frac{1}{2}W, Solid
                                                           R 007
                                                                   RC10471120 470Ω
 J 433
         YP10000360
                      Plug
                      Plug
                                                           R008
                                                                   R C10471120
                                                                               470\Omega
                                                                                       ±10% ½W, Solid
         YP10000360
 J 434
                                                                   R\,T10225010-2.2\,M\Omega~\pm10\%~1~W,\,Carbon~Film
                                                           R009
         YD26110052
                      P.C Board
 P500
                                                           R012
                                                                   RM02540080 250 KΩ
                                                                                        (M.N)
                                                                                                  Variable
                               \pm 10\% 1 W, Solid
 R 501
         RC10271010
                      270\Omega
                                                                   RM01040022 100 KΩ
                                                                                                  Variable
         RC10201010
                      200\Omega
                               ±10% 1 W, Solid
                                                           R013
                                                                                         (A)
 R 502
                      220 \mu F
                                10 V
                                                           R014
                                                                   RM05030110
                                                                                50 K\Omega
                                                                                                  Variable
 C501
         EA22701040
                                       Elect.
         EA47701620
                                16V
                                                           R015
                                                                   RM05030110
                                                                               50 K\Omega
                                                                                                  Variable
 C 502
                      470 \mu F
                                       Elect.
                                                           C 001
                                                                   EA10700650 6V 100\muF +100\%-20\% Elect.
                                       Elect.
 C 503
         EB33805010
                      3300 \mu F
                                50 V
 C 504
         EA47702520
                      470 \mu F
                                25 V
                                       Elect.
                                                           C 002
                                                                   DK17103010 0.01\muF \pm 20\%
                                                                                                  Cer.
                                                           C003
                                                                   DO07473530 0.047μF AC400V Oil Cap.
 C 505
         DK18103510
                      0.01 \mu F
                               500 V
                                       Cer.
                                                           C 008
                                                                   DF17333010 0.033μF
                                                                                          ±20%
 C 506
         DK18103510
                      0.01 \mu F
                                500 V
                                       Cer.
                                                                                                  Mylar
                                                           C 009
                                                                   DF17333010 0.033μF
                                                                                          ±20%
 C 507
         EA47703510
                      470 \mu F
                                35 V
                                       Elect.
                                                                                                  Mylar
                                                           C010
                                                                                          \pm 20\%
         YP10000360
                      Plug
                                                                   DF17224020 0.22 \mu F
                                                                                                  Mylar
 J 501
         YP10000360
                                                           C011
                                                                   DF17224020 0.22 \mu F
                                                                                          ±20% Mylar
 J 502
                                                                   HT402572A0 Transistor 2SD257 (Ror O)
                                                           H001
         YP10000360
 J 503
                      Plug
                                                                   HT402572A0 Transistor 2SD257 (Ror O)
         YP10000360
                                                           H002
 J 504
                      Plug
                                                           H003
                                                                   HT402572A0 Transistor 2SD257 (Ror O)
         YP10000360
 J 505
                      Plug
         YP10000360
                                                           H004
                                                                   HT402572A0 Transistor 2SD257 (Ror O)
 J 506
                      Plug
                                                           L001
                                                                   LF11400360 AM Ant. Coil
         YP10000360
 J 507
                      Plug
                                                           L003
                                                                   TS18501070 Power Transf.
 J 508
         YP10000360
                      Plug
                                                           W001
                                                                   YW27880010 Wire Materials
         YP10000360
                      Plug
 J 509
 J 510
         YP10000360
                      Plug
                                                           W002
                                                                   YX27880010
                                                                                Wire Materials
                                                           J 017
                                                                   YJ08000090
                                                                                Fuse Holder Socket
 J 511
         YP10000360
                      Plug
                                                           J 018
                                                                   YJ08000090
                                                                                Fuse Holder Socket
         YP10000360
                      Plug
 J 512
                                                                   Y 108000090
         HD30010090
                      Diode
                                1S336
                                                           J 019
                                                                                Fuse Holder Socket
 H 501
                                                                   YJ08000090 Fuse Holder Socket
                                HR-5A
                                                           J 020
         HD20003010 Diode
 H502
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#### marrantz

| REF.<br>DESIG. | MARANTZ<br>PART NO.          | DESCRIPTION                                  | REF.<br>DESIG. | MARANTZ<br>PART NO. | DESCRIPTION |
|----------------|------------------------------|--|----------------|---------------------|-------------|
|                |                              |  |                |                     |             |
| J 021          | YL01030010                   | 3P Terminal for AC                           |                |                     |             |
| J 022          | Y J 04000090                 | AC Input Socket                              |                |                     |             |
| J 001          | Y J 11000040                 | Socket for FM Ant.                           |                |                     |             |
| J 002          | YJ11000030                   | Socket for MW/LW                             |                |                     |             |
| J 003          | YJ11000010                   | Socket for Phono Input                       |                |                     |             |
| J 004          | Y J 01000550                 | Jack for Head Phone                          |                |                     |             |
| J 005          | YJ11000010                   | Socket for Aux Input                         |                |                     |             |
| J 006          | Y J 11000010                 | Socket for Tape Play/Rec                     |                |                     |             |
| J 007          | YL01030010                   | Terminal for AC                              |                |                     |             |
| J 008          | YT01010030                   | Terminal for Ground                          |                |                     |             |
| J 009          | Y J 02000100                 | Socket for Pilot Lamp                        |                |                     |             |
| J 010<br>J 011 | Y J02000010                  | Socket for Pilot Lamp                        |                |                     |             |
| J 011          | Y J02000650                  | Socket for Meter Lamp                        |                |                     |             |
| J 012          | Y J 02000070<br>Y J 11000020 | Socket for Stereo Lamp<br>Socket for Speaker |                |                     |             |
| J 013<br>J 014 | Y J 11000020                 | Socket for Speaker                           |                |                     |             |
| J 014<br>J 015 | Y J 11000020                 | Socket for Speaker                           |                |                     |             |
| J 016          | Y J 11000020                 | Socket for Speaker                           |                |                     |             |
| M001           | I M11024060                  | •  |                |                     |             |
| M002           | I N10080010                  | Lamp for Stereo Beacon                       |                |                     |             |
| M003           |                              | Lamp for Pilot Lamp                          |                |                     |             |
| M004           | I N10060030                  | Lamp for Pilot Lamp                          |                |                     |             |
| M005           | I N10060030                  |  |                |                     |             |
| S 001          | SR02030032                   | Rotary Switch for Speaker                    |                |                     |             |
| S 002          | SR05050010                   |  |                |                     |             |
| S 003          | SR06050060                   | Rotary Switch for Function                   |                |                     |             |
| S 004          | SP04010062                   | Push Switch for Power ON-OFF                 |                |                     |             |
| F001           | FS10050030                   | Fuse 0.5A                                    |                |                     |             |
| F002           | FS10050030                   | Fuse 0.5A                                    |                |                     |             |
| F003           | FS10100030                   | Fuse 1A                                      |                |                     |             |
| F004           | FS10100030                   | Fuse 1A                                      |                |                     |             |
| P800           | YD27880080                   | P.C Board (LW)                               |                |                     |             |
| R801           | RT10153140                   | 15K $\Omega$ $\pm 10\%$ ¼W, Carbon Film      |                |                     |             |
| R 802          | RT10563140                   | 56KΩ ±10% ¼W, Carbon Film                    |                |                     |             |
| C801           | CT41400020                   | Trimmer                                      |                |                     |             |
| C804           | DD12050010                   | $5pF \pm 1pF$ Cer.                           |                |                     |             |
| C 805          | DD16121010                   | $120 \mathrm{pF} \pm 10\%$ Cer.              |                |                     |             |
| C 806          | DF17103010                   | $0.01\mu F \pm 20\%$ Mylar                   |                |                     |             |
| C807           | DD16201010                   | 200pF ±10% Cer.                              |                |                     |             |
| C808           | DF66101010                   | 100pF ± 5% Mylar                             | **             |                     |             |
| C809           | DD16300010                   | 30pF ±10% Cer.                               |                |                     |             |
| L801           |                              | Choke Coil 220µH                             |                |                     |             |
| L802<br>L803   | LA10010150<br>LO10010170     | Ant. Coil (LW) OSC Coil (LW)                 |                |                     |             |
| J 801          | YP10000360                   | Plug   |                |                     |             |
| J 802          | YP10000360                   | Plug   |                |                     |             |
| J 803          | YP10000360                   | Plug   | . =            |                     |             |
| J 804          | YP10000360                   | Plug   |                |                     |             |
| J 805          | YP10000360                   | Plug   |                |                     |             |
| J 806          | YP10000360                   | Plug   |                |                     |             |
| J 807          | YP10000360                   | Plug   |                |                     |             |
| J 808          | YP10000360                   | Plug   |                |                     |             |
|                |                              | ·  |                |                     |             |